CERTIFICATE

This is to certify that this dissertation work on **"KUMBAVATHAM"** has been carried out by **Dr.G.KRISHNAPRAKASH** during the year 2010-2013 in the **Post Graduate Department of Maruthuvam, Government Siddha Medical College, Chennai-600106** under my guidance and supervision in partial fulfillment of regulation laid by **The Tamilnadu Dr. M.G.R Medical University, Chennai** for the *final M.D* **(siddha) Branch I- MARUTHUVAM** examination to be held in **April 2013**.

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Principal
Govt siddha Medical College,
Chennai - 600106.

H.O.D
Post graduate Department,
Branch –I Maruthuvam,
Govt siddha Medical College,
Chennai-600106.

A STUDY ON

KUMBAVATHAM

the dissertation Submitted by

Reg.No .32101105

under the Guidance of

Prof. Dr. P.PARTHIBAN M.D(S)

HEAD OF THE DEPARTMENT,

POST GRADUATE POTHU MARUTHUVAM DEPARTMENT

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Introduction

INTRODUCTION

Indian subcontinent is famous for its own medical system, which strictly precincts with principles of nature called INDIGENOUS system. This includes Siddha, Ayurveda, and Unani.

The Siddha system of medicine, “THE GIFT OF NATURE”, which was originated from Lord Shiva and was gifted to Tamilians by people called Siddhars. Siddhars are people who are not only physicians, they are social reformers.

Siddha science considers nature and human as essential. Man is a part and parcel of the universal nature. Nature functions well in human system. A man who identifies himself with nature is sure to know everything of nature as well. Saint THIRUVALLUVAR in his eternal Tamil classic THIRUKKURAL.

“Í ¨ Å ´ Çt ° Úµ ¨ º ¿¡üÈõ ± ý È ³ ó¾ ý
Å ¨ ¸ ¦¾¡tÅ¡ ý ¸ ð§¼ ¯ Ä Ì.”
-¾Õ ì Ì È û -27

Says that those who have understood the five senses of taste, sight, the nature of the world. This holds well in the case of a good physician too. Ignoring of nature’s law upsets the human system and diseases occur.

According to siddhars the human body is composed of ninety-six thathuvas or constituents principles in nature including elements, bodily and mental organs, e.t.c. and further add that the human body is consist of 72,000 blood vessels, 13,000 nerves, 10 main arteries, 10 vital airs (prana) all together in the form of a network, and it is owing to the derangement of the three humours becomes liable to 4448 diseases. This is well explained in the following verses from ISWARA’S MEIGNANA NAADI

“ã Ä ¦ ÁØÀò¾Ã¡Â¢ÃÁ¡õ ¿¡Ê
Ó ¨ É ò ¦¾ØóÐ Å ¨ Ä§À¡Ä ÓÊó¾§¾¡§¼
§ ¸ ¡ÄÁ¡öô À¾ý ã Å¡Â¢Ãõ ¿ÃõÒ
§ ¸ ¡÷ ¨ ÅÂ¡ö Ý úó¾Õ ì Ì õ Ü ðÊü Ì û§Ç

¸¡ÄÁ¡õ ¿¡ÊÀòÐ Å¡ÔÀòÐ
¸¾ò¾¦¾øÄ¡ Ó ì§¸¡÷¨ Åô À¨ ¸ÂÉ¡§Ä
¿¡ÄÉ¡Ä¡ÂÃòÐ ¿¡ Ûü§È¡ Î
¿Åøø ¿¡üÀò ¦¾¡ ñ §½Â¡ö ¿¡ð¼Ä¡§Á."

-®ŠÅÃ ¦Áö»¡É ¿¡Ê

Humoral pathology explains that all disease are caused by the mixture of the three cardinal humours viz VATHAM, PITHAM, IYYAM. Those three humours and the relative proportions are responsible for a person's physical and mental qualities and dispositions.

- The external air corresponds to the internal VATHAM
- The external heat corresponds to the internal PITHAM
- The external water corresponds to the internal IYYAM.

Human body is thus linked with the external world. The three humours maintain the upkeep of the human body through their combination. An alteration of these three humours causes diseases.

VATHA is a prime humour . The common symptom of altered vatham is pain and it is the accepted as a derangement of vatham , the first cause for occurrence of diseases.

Pain is a helpful sign diagnosing a problem. Without pain, one might seriously hurt themself without knowing it, or might not realize medical problem that needs treatment. Once treated the problem, pain usually goes away. However, sometimes pain goes on for weeks, months or even years is named chronic pain.The above told symptoms are explained in siddha texts under the title of kumbavatham in

yugi vaithiya chindhamani 800.So finaly the disease (“periarthritic shoulder” or “frozen shoulder”) is compared with “KUMBAVATHAM” here.

Frozen shoulder is a common disorder which is characterised by pain and loss of movement . Its cause is poorly understood and its management is disputed because of lackof supporting evidence. The great pathologist Duplay, in 1872, used the term “peri-arthritis scapulohumerale” to describe the condition. In 1934, Codman introduced the term “frozen shoulder”.

The prevalence to be slightly greater than 2% in the general population. It is more common in women and between the ages of 40 and 60 years. Recurrence is unusual and both shoulders are affected in between 6% and 34% of cases.

“KANTHAGA PARPAM” is the one of the medicine quoted in siddha literatures for treating kumbavatham. So I pledge here to take my dissertation to put my whole effort to make a very best treatment for kumbavatham with kanthaga parpam.

Aim & Objectives

AIM AND OBJECTIVES

AIM OF THE STUDY:

Primary aim:

To assess the safety and efficacy of the siddha drug, **kanthaga parpam**.

Secondary aim:

To evaluate the effect of kanthaga parpam to reduce the pain in the shoulder joints, radiating pain, tenderness, stiffness and difficulty to move the joints.

OBJECTIVES OF THE STUDY:

- To collect the authorised measures and review the ideas of kumbavatham in Siddha and modern literatures.
- To have an idea about the relation of the disease with **age, occupation,economic status, habits, family history and climatic conditions.**
- To expose the efficacy of siddhars diagnostic principles such as mukkutram, envagai thervugal, ezhu udalthadhukkal, neerkuri and neikuri.
- To have detailed clinical investigations.
- To have a clinical trial on the disease **"kumbavatham"** with the siddha medicine, **"kanthaga parpam"** .
- To evaluate ,
  - **Chemical** [qualitative & quantitative]
  - **Toxicological** [acute & subacute]
  - **Pharmacological action**
- To handle the modern parameters to confirm the diagnosis and prognosis of the study.

Review of Literature

Siddha Aspects

REVIEW OF LITERATURES

SIDDHA ASPECTS

“வாயுவின் குணத்துடன் கூடணுதல்
வாயுவினி டங்களில் நோய்களுண்டு
வாயுவில் குளிர்ச்சிதான் கூடிடிவோ
வாயுவில் அனல்தரும் நெய்ப்பமைந்தால்
வாயுவும் அடங்கிடும் வாய்மையிது
வாயுவின் பிணிகளைப் போக்கிடவே
வகுத்திடும் முனிமொழி கண்டிடுமே”

– சித்த மருத்துவாங்க சுருக்கம்

In our ancient Siddha literature the diseases are classified into 4448 types based on the mukkutra theory (Vali (வளி), Azhal, Iyam). However Vali(வளி) diseases got a major role among them, here are so many types of vali (வளி) diseases and kumbavatham is one variety which is taken for my dissertation.

As per our Siddha aspect the first phase in human life is attributed to vali (வளி), the middle to Azhal and the last phase to Iyam. This is known from the following verses.

“வாதமாய் படைத்து பித்த வன்னியமாய் காத்து
சிலேத்தும சீதமாய் துடைத்து

- தேரையர் மருத்துவ பாரதம்

The details of Vali (வளி) have been dealt before reviewing the specific signs and symptoms of kumbavatham.

DEFINITION

Vali (வளி) is one of the three humours. Among the five elements (pancha boothas) Vali (வளி) is formed by Vali (Air) and Vin (sky). In a healthy individual the existence of the three humours are in the ratio of 1: 1/2 :1/4 respectively. When the three humours are in the above said ratio, they are called as thathus and when they are dearranged, they are called as kutram.

The alteration of the above ratio may be due to environmental factors, diet and behaviors etc. When Vali (வளி) is affected the other two thathus are also affected that leads to the pathological changes. This is known from the following quotation.

"வாதமலாது மேனி கெடாது"

- தேரையர்

Seats of Vali (வளி)

"நாமென்ற வாதத்துக் கிருப்பிடமே கேளாய்
நாடிக்குக் கீழென்று நவிலலாகும்"

- யூகிமுனி

Vali (வளி) Generally lives in:

- Abanan
- Edakalai
- Kaamakodi
- Undhiyin Keezh Moolam
- Hip region
- Bones
- Muscles
- Nerves
- Joints
- Skin
- Hair follicles
- Stools

Natural Properties of Vali (வளி)

- Giving Briskness
- Respiration
- Functioning the mind, thoughts and body.
- Regulation of fourteen physiological reflexes (Vegams)
- Uniform functioning of the seven udal kattugal.
- Strengthening the five sensory organs.

CHARACTERISTICS OF VALI (வளி)

- Body Pain
- Pricking Pain
- Tearing Pain
- Nerve Weakness
- Shivering
- Mental distress
- Dryness
- Movements
- Joint Pain
- Traumatic Pain
- Dislocation of the joints of upper and lower limbs
- Piloerection
- Poldypsia
- Severe pain in the calf and thigh muscles
- Bony pricking pain
- Anuria
- Constipation
- Difficulty in flexion and extension of the limbs
- All tastes like astringent

- Astringent salivation
- Darkness of Skin, stools and urine

Relation with five elements:

Vali (வளி)	-	Vali (Air) & Vin
Azal	-	Thee
Iyam	-	Neer & Mann

Vali (வளி) has “Vali (Air)” and “Vin” as it’s elemental constituents. If “Vali ” and “Vin” or any one of them is decreased (or) increased from the normal level, it will surely lead to pathological state of Vali (வளி).

Regarding diet, bitter Pungent and astringent tastes contains “Vali (Air)” and bitter alone contains “Vin”. So if these are consumed in improper amounts results in the vitiation of vali (வளி) and eventually vali (வளி) diseases. The six tastes and their constituents elements are as follows.

Sweet	-	Mann + Neer
Sour	-	Mann + Thee
Bitter	-	Neer + Thee
Bitter	-	Vali (Air) + Vin
Pungent	-	Vali (Air) + Thee
Astringent	-	Mann + Vali (Air)

Relation with Tastes

"புளி துவர் விஞ்சுங் கறியாற் பூரிக்கும் வாதம்
ஒளி யுவர் கைப்பேறில் பித்தஞ் சீறும் - கிளிமொழியே
கார்ப்பினிப்பு விஞ்சிற் கபம் விஞ்சுஞ் சட்டி ரதச்
சேரப் புணர் நோயணுகாதே.”

- கண்ணுசாமியம்

Source and astringent are the tastes that increase Vali (வளி)

"வாத மேலிட்டால் மதுரம் புளியுப்பு
சேதமுறச் செய்யும் சீறையம் - ஓதக்கேள்
காரந் துவர் கசப்பு காட்டுஞ் சுவையெல்லாம்
சாரப் பரிகாரம் சாற்று"

- கண்ணுசாமியம்

Varieties of Vali (வளி):

The Vali (வளி) is dived into 10 types according to their location and functions described in the siddha texts. They are

Uyirkkaal (Piranan)
Kezhnokkum Kaal (Abanan)
Paravukaal (Viyanan)
Mel Nokkumkaal (Udhanan)
Nadukaal (Samanan)
Naagan
Koorman
Kirugaran
Devadhathan
Thananjeyan.

Aetiology of Vali (வளி) Diseases

The common etiological factor for all types of Vali (வளி) diseases including kumbavatham" have been described generally in Yugi Vaidhya Chindhamani – 800; Agasthiyar Kanma Kaandam – 300 and Agasthiyar Guna Vagadam.

Agasthiar Gunavangadam

"தொல்லை செய்ய இன்றும் வெகு வாத நோய்கள்
தொல்லுலகில் மாந்திருக்குச் காண்பதுண்டு
எல்லையில்லை வாதநோய் நேர்மை தன்மை
இயல்பாக அறிந்திடவே விபரங்கேளே"

"விபரமடா அசதி சன்னி மூளை நோவு
விரிவான மூளையது மிருதுவாகி
அவனிதனில் மூத்திரக் குண்டிக்காய் வியாதியாலும்
தவமுனிவர் தீர்காக்கை மேகரோகம்
தன்மையுள்ள முத்தண்டுக் கொடி வியாதி
அவமிலாப் பரிச நரம்பழுத்தங் கண்டாய்
அணுகுமடா வாதநோய் ஆகும் பாரே."

"அணுகுமடா மாமிசத்தின் வியாதியாலும்
அப்பனே சூதகத்தின் பெருக்காலும்
குணமில்லா இரசம் வங்கம் தின்னலாலும்
குடிகெடுத்த வாதமது உண்பாமப்பா."

- அகத்தியர் குணவாகடம்

- Brain diseases
- Rental Discuses
- Sexually transmitted diseases
- Diseases of the vertebral column & spinal cord
- Mennorhagia
- Take in property prepared medicine of mercury and will lead will cause vatha diseases.

In Agasthiyar Kanma Kaandam – 300

"நூலென்ற வாதம் வந்த வகை தானேது
துண்மையாய்க் கன்மத்தின் வகையைக் கேளு
காலிலே தோன்றியது கடுப்பதேது
கைகாலில் முடக்கியது வீக்கமேது

கோலிலே படுகின்ற விருட்சமான
குழந்தை மரந்தன்னை வெட்டல் மேல் தோல் சீவல்
நாலிலே சீவ செய்து கால் முறித்தல்
நல்ல பண்பு தழை முறித்தல் நலித்தல் தானே

- பாடல் 56

- Cutting the trees.
- Breaking the legs of living animals
- Cutting the branches and leaves of living trees.

In Yugi Vaidhya Chindhamani – 800

"என்னவே வாதந்தா னெண்பதாகும்
இகத்திலே மனிதர்களும் செய்யுமாறு
பின்னவே பொன்னதனையே சோரஞ் செய்து
பெரியோர்கள் பிராமணரைத் தூடனித்தும்
வன்ன தேவ சொத்தில் சோரஞ் செய்தும்
மாதா பிதா குருவை மறந்த பேர்க்குமு
கன்னவே நிந்தை செய்தால்
காயத்திற் காலந்திடுமே வாதந்தாளே"

- பாடல் 243

"தானென்ற கசப்போடு துவர் புறைப்பு
சாதகமாய் மிஞ்சுகிலும் சமைத்த வன்னம்
ஆனென்ற வாறினது புசித்தலாலும்
ஆகாயத் தேறலது குடித்தலாலும்
பானென்ற பகலுறக்க மிரா விழிப்பு
பட்டினியே மிகவுறுதல் பாரமெய்தல்
தேனென்ற மொழியார் மேற்சிந்தையாதல்
சீக்கிரமாய் வாதமது செனிக்குந்தானே."

- பாடல் 244

"ஆனன வரன்றனையே மதியா மாந்தர்

அகதி பரதேசியர் கட் கன்ன மீயார்
கோனான குருமொழியை மறந்த பேர்கள்
கொலை களவு பொய்காமங் குறித்த பேர்க்கு
ஊனை சடந்தன்னில் வாதம் வந்து
உற்பவிக்கும் வேதத்தின் உண்மைதானே

- பாடல் 253

"பகரவே வாதமது கோடித் தப்போ
பண்பாக பெண்போக மதுதான் செய்யில்
நகரவே வெகுதூர வழி நடக்கில்
ஒளிரான காற்றுமே பனி மேற்பட்டால்
மிகரவே காய்கள் கனி கிழங்கு தன்னை
மிக வருந்தி மீறியே தயிர்தான் கொண்டால்
முகரவே முதுகெலும்பை முறுக்கி நொந்து
முழங்காலும் கணைக்காலும் கடுப்பு உண்டாக்கும்"

- பாடல் 285

- Breach of trust
- Abusing the elderly people and priests
- Exploitation of charitable properties
- Ingratitude with mother, father and teacher
- Excessive consumption of bitter, astringent and pungent taste foods.
- Intake of spoiled rice
- Drinking of rain water
- Sleeping during day and awakening during night
- Undue starvation
- Lifting or carrying of heavy loads
- Excessive lust
- Disrespectful attitude with God
- Refusing food for destitute and her mites

- Disregarding the advice of preceptors
- Involving in murdering stealing, lieing and lustful activities
- Indulging in sexual act during exaggerated vali (வளி)
- Walking for a klong distance
- Exposure to chillness
- Excessive intake of curd immediately after excessive intake of vegetables, fruits will lead to twisting pain in the vertebral column and pain in the ankle and knee joints.

Classification of Vali (வளி) diseases:

Various Siddha texts gives different classification of Vali (வளி) diseases as follows:

Sl. No	Name of the Siddha Text	Types
1.	Agathiyar 2000 எண்பது வாதமாகு மிருவகைப்படுத்திக் காணின் நண்புறு அரைக்கு மேலே நாற்பது வாதமாகும் பண சேரரைக்குக் கீழே பத்து நான்காகுமென்று உண்டு சேர் குழலினாளே வாதத்தின் கூறுதானே	80
2.	Agathyar Gurunadi – 235	84
3.	Agasthiyar Rathina Surikkaam – 500 "மற்றமே வாதரோகம் வகை எண்பத்து நாலே"	84
4.	Astaanga Sangiragam	85
5.	Bohar Vaidhiyam – 700 "வாச்சென்ற வாதம் எண்பதுவும் போகும்"	80
6.	Jeeva Rakshaamiradham	80
7.	Noi Naadal and Noi Mudhal Naadai – Part II	85
8.	Thanvanthiri Vaidhiyam	80
9.	Theraiyar Vaidhiyam	81
10.	Yugi Vaidhya Chindhaamani perunool – 800 என்னவே வாதமது எண்பதாகும்.	80

Clinical Features:

The signs and symptoms of Vali (வளி) diseases have been given in many Siddha classical text books as follows:

In Agasthiyar – 2000

"வாதத்தின் குணமேதென்னில் மயக்குந்தியெங்கும் மலர் சிவிக்கும்
பாதங் குளிர்ந்து சருவாங்கம் பற்றி நடக்கு முகங்கடுகுஞ்
சீத்துடனே வயிறு புண்ணாஞ் சிரிப்பித் ததுந்தெறி மூச்சாம்
போதத் தண்ணீர்தான் வாங்கும் புகழும் பஞ்ச குணமாமே".

- அகத்தியர்

- Giddiness
- Stabbing pain in the face
- Redness of eyes
- Peptic ulcer
- Abdominal distension
- Joint pain in upper and lower limbs Numbness in the limbs
- Oliguria
- Drowsiness and
- Chillness of body

Agasthiyar Naadi:

"சொல்லவே வாதமது மீறிற்றால்
சோர்வடைந்த வாயுவினால் தேகமெங்கும்
மெல்ல கைகால் அசதியுண்டாகும்
மெய் முடங்கும் நிமிரவொண்ணாத திமிர் உண்டாகும்"

- அகத்தியர் நாடி

- Weakness of the limbs
- Stuggishness
- Stiffness and
- Numbness

Theraiyar Vaagadam:

"வாத வீறு அன்னமிறங்காது கடுப்புண்டாம் வண்ணமுண்டாம்
மோது கட்டு ரோகம் கரமுண்டா மிருகலுமா முறங்காதென்றும்
ஓது சூரிய வாத மனலாகு நடுக்கமுண்டாம் பொருள்களாய்ந்
தீதெனவே நரம்பிசித்து சந்துகள் தோறும் இடுங்குந்தாளே"

- தேரையர் வாகடம்

- Loss of appetite
- Back ache
- Fever
- Cough
- Sleeplessness
- Shivering and
- Pain in joints.

"தக்க வாயு கோபித்தால் சந்துவுளைந்து தலை நோவா
மிக்க மூரி கொட்டாவி விட்டங்கெரியு மலங்கட்டும்
ஒக்க நரம்புதான் முடனஙகுமுலர்ந்து வாய் நீரூறி வரும்
மிக்க குளிரும் நடுக்கமுமாய் மேனி குளறி வருங்காணே"

- பாடல் 42.

- Pain in the joints
- Head ache
- Excessive yawning
- Constipation

KUMBAVATHAM

Definition

Kumbavatham is one of the vali (ÅÇ¢) disease described in ``Yuki vaidhta chindhamani -800 ``. It is a condition dealing with the involvement of the shoulder joints , acute pain in shoulder joints , tenderness, stiffness, difficulty in moving the shoulder joints ,diffuse pain in the shoulder with radiation down to the middle of the upper arm .

Aetiology

The aetiolgical factors of vali (ÅÇ¢) disorder were described in various siddha texts. The causes are also applicable to kumbavatham. Hence they are briefly mentioned below.

In yugi vaidhya chindhaamani, the following causes are given as follows.

¿Å¢Ä§Å §¾¡ ñ Á¢Ðõ ¸Ã¾¢ý Á¢Ð
¿Ä¢óÐ ¦Áò¾ Å¡¸¢§Â ¿º× ñ ¼¡ Ì õ
¸Å¢Ä§Å ¸ý É ¦Á¡ Î ¿Â¡Éóò ¾¡ Û í ì
¸ Î òÐ§Á Å¢ÕÅ¢ÕôÒ ¦Á¡¢× í ì ¸¡ Ï õ
ÐÅ¢Ä§Å ÐÊôÀ¡ Ì õ º¢Ã Í ¾ý É¢ü
ÍÆüÈ¢§Â ¿¡À¢ì ¸¢ú ÅÄ¢Ô Ó ñ ¼¡ Ì õ
« Å¢Ä§Å ÂÊ¿¡ ì ¸¢ ÄÆý Ú ¸¡ Û
ÁÄÕ§Á ÅÕõ§À Å¡¾óò ¾¡§É
-ä ¸¢ ¨ Åò¾Â º¢ó¾¡Á½¢ 800

- Burning pain in shoulder joints and upper limbs
- Burning sensation in the jaws and eyes

- Twitching over the scalp
- Guiddiness and fever
- Pain in the lower abdomen
- Glossitis

According to the physiological function, vali is ten types. They are

S.NO	VATHAM	GENERAL FEATURES	CHANGES IN KUMBAVATHAM
1.	Piranan(Uyir Kaal)	Responsible for respiration and it is necessary for proper digestion	Normal
2.	Abanan(Kizhnokkumkaal)	Responsible for all downward forces such as voiding of urine, stools, semen, menstrual flow	Normal
3.	Viyanan(paravukaal)	Dwells in the skin and is concerned with the sense of touch... extension and flexion of the parts of the body and distribution, of the nutrients to various parts of the body	Affected
5.	Samanan(nadukkaal)	Considered essential for proper digestion,	Normal

		assimilation and carries the digested nutrients to each and every organ	
6.	Nagan	Helps in opening &closing of eyelids	Normal
7.	Koorman	Responsible for vision, lacrimation and yawning	Normal
8.	Kirugaran	Induces appetite, salivation, all secretions in the body including nasal secretion and sneezing	Normal
9.	Thevathathan	Induces and stimulates a person to become alert, get anger, to quarrel, to sleep etc	Normal
10.	Dhananjeyan	Resides in the cranium and produces bloating of the body after death. This leaves from the body after 3days of death, forming a way through the skull.	----

In Kumbavatham, **Viyanan** will be mainly affected .

FUNTIONS OF AZHAL:

"பசிதாகம் ஓங்கொளிகண் பார்வைபண் டத்து
ருசிதெரி சத்தி வெம்மை வீரம் - உசித
மதிகூர்த்த புத்திவனப் பளித்துக் காக்கும்
அதிகாரி யாங்கா னழல்"

❖ மருத்துவ தனிப்பாடல் பக்கம்16

Azhal is functionally divided in to five types. They are

S.NO	PITHAM	NORMAL FEATURES	CHANGES IN KUMBAVATHAM
1.	Anarpitham(Akkuanal)	Peps up the appetite and aids in digestion.	Normal
2.	Ranjagapitham(Vanna eri)	Responsible for the color and contents of blood.	Normal
3.	Sathagapitham(Attralangi)	Controls the whole body and is held responsible for fulfilling a purpose.	Affected
4.	Pirasagapitham(Ollolithee)	Dwells in the skin and concerned with the shine, glow, texture and its complexion	Normal
5.	Alosagapitham(Nokku Azhal)	Responsible for the perception of vision.	Normal

FUNTIONS OF IYAM:

"திடமீயு மென்பிணைப்புத் திண்மையுற்ற யாப்பும்
அடலேர் வழுவழுப்பும் ஆக்கைக் - கிடர்க்கு

வெருவாப் பொறுமையும் மேலான காப்பாம்
பெருமைத்தா மையமெனப் பேசு”

மருத்துவ தனிப்பாடல் பக்கம்20

It is of five types. They are

S.NO	KABHAM	GENERAL FEATURES	CHANGES IN KUMBAVATHAM
1.	Avalambagam(Alli Iyyam)	Lies in the respiratory organs, exercises authority over other khapas and controls the heart and circulatory system.	Normal
2.	Kilethagam(Neerpi Iyyam)	Found in stomach as its seat, moistens the food, softens and helps to be digested.	Normal
3.	Pothagam(Suvaikanna Iyyam)	Hold responsible for the sensory perception of taste.	Normal
4.	Tharpagam(Niraivu Iyyam)	Presents in the head and is responsible for the coolness of the eyes, sometimes may be referred to as cerebrospinal fluid	Normal
5.	Santhigam(Ondri Iyyam)	Necessary for the lubrication and the free movements of joints.	Affected

In Kumbavatham, santhigam affected.

UDAL KOORUGAL (SEVEN PHYSICAL CONSTITUENTS):

"இரமிரத் தந்தசை நெய் நிணமென்பு மச்சைவீந்தென்றேழும் முறையே"
சரதமொடு மெய்மனத்து நிறைவுதரும்உயிருட்டுத்தாங்கி யிருக்கும்
உரமுதவும் மேடுபள்ளம் நிரவும் நெய்ப் பசையூட்டும் ஓங்கி நிறுத்தும்
பரந்தென்பின் துளைகடொறும் நிரம்பிடுங்கள் முளைதோன்றப் பண்ணும் தெரிவாய்"
-சித்த மருத்தூவாங்கச் சுருக்கம் -பக்கம்334

The human body is made of seven basic physical constituents. These constituents should be in harmony and function normally. Any variation in them will lead to their functional deviations.

The Natural characters of the seven physical constituents

S.NO	UDAL KATTUGAL	GENERAL FEATURES	CHANGES IN KUMBAVATHAM
1.	Saaram (digestive essence)	Responsible for the growth& development. It keeps the individual in good temperament and it enriches the bood.	Normal
2.	Senneer (blood)	Responsible for the colour of blood and for the intellect, nourishment, strength, vigour and valour of the body.	Normal
3.	Oon (muscle)	Gives lookable contour to the body as needed for the physical activity. It feed the fat next day and gives a sort of plumpness to the body	Affected
4.	Kozhuppu (fat)	Lubricates the organs to facilitate frictionless	Normal

		functions.	
5.	Enbu (bones)	Supports & protects the vital organs, gives the definite structure of the body and responsible for the posture and movements of the body	Affected
6.	Moolai (bone marrow)	Nourishes the bone marrow and brain which is the centre that controls other systems of body	Normal
7.	Sukkilam/ Suronitham(sperm/ ova)	Responsible for reproduction	

THE VARIATIONS OF THE PHYSICAL CONSTITUENTS:

1. SAARAM

Increased Saaram:Leads to diseases of increased kapham like indigestion Etc

Decreased Saaram : Leads to loss of weight, tiredness, lassitude, dryness of the skin and diminished activity of the sense organs.

2. SENNER

Increased Senner : Causes boils in different parts of the body throbbing pain, anorexia, mental disorder, splenomegaly, Colicky pain., increased blood pressure, reddish eye and Skin, jaundice, haematuria etc.

Decreased Senner : Leads to anaemia, tiredness, neuritis and lassitude, Pallor of body.

3. OON

Increased Oon : Oon in excess causes cervical lymph adenitis, venereal ulcer, tumour in face, abdomen, thigh genitalia etc are the signs of increased Oon

Decreased Oon : Leads to impairment of sense organs, joints jaw, thigh and genitalia gets shortened

4. KOZHUPPU

Increased Kozhuppu: Identical to that of increased Oon associated with Dyspnoea and loss of acidity

Decreased Kozhuppu: Leads to pain in the hip region and diseases of the spleen

5. ENBU

Excess Enbu : Growth in bones and teeth

Decreased Enbu : Loosening of teeth and nails and Splitting and falling of hair

6. MOOLAI

Increased Moolai : Causes heaviness, swollen eyes, swollen phalanges, Oliguria and non healing ulcers

Decreased Moolai : Causes osteoporosis and sunken eyes

7. SUKKILAM / SURONITHAM

Excess Sukkilam/Suronitham : Causes lust towards women and cause Urinary calculus

Decreased Sukkilam/Suronitham : Causes failure in reproduction, pain in the genitalia.

KAALA MARUBADUGAL:

PARUVAKALAM (SEASONS):

According to ancient tamilians, the one year is divided in to six seasons and each season consists of two months and the year starts from Margazhi.

S.NO	**KAALAM**	**TAMIL MONTHS**	**MUKKUTTRA MARUPAADUGAL**
1.	Kaar Kaalam	Aavani & Purattasi Aug 16 To Oct15	*VATHAM*-Vettunilai Vazharchi *PITHAM*-Thanilai Vazharchi
2.	Koothir Kaalam	Iypasi &Karthigai Oct 16 To Dec15	*VATHAM*- Thanilai Vazharchi *PITHAM*- Vettunilai Vazharchi
3.	Munpani Kaalam	Margazhi & Thai Dec16 To Feb15	*PITHAM*- Thanilai Vazharchi
4.	Pinpani Kaalam	Masi& Panguni Feb16 To June15	*KABHAM*- Thanilai Vazharchi
5.	Elavenir Kaalam	Chithirai & Vaikaasi April16 To June15	*KABHAM*- Vettunilai Vazharchi
6.	Mudhuvenir Kaalam	Aani & Aadi June16 To Aug 15	*VATHAM*- Thanilai Vazharchi

THINAI (LAND):

Siddhars classified the lands in to five types. They are

1. Kurunchi - Mountain range
2. Mullai -Pastoral area of the forest
3. Marudham -The fertile river bed
4. Neidhal -The coastal region
5. Paalai - Arid desert

- The winter season gives good health to the man, early summer and latter rainy gives moderate health. Whereas early rainy and latter summer are more prone to diseases, that's why siddhars called it as Aanaga kalam
- Marudha nilam is the fertile area where no disease occurs

RELATION BETWEEN MUKKUTRAM, KAALANGAL AND THINNAIGAL

MUKKUTRAM	PARUVAKALAM(SEASONS)			THINAI
	Thannilai vazharchi (Accumulation)	Vaetrunilai vazharchi (Aggravation)	Thannilai adaithal (Alleviation)	
VATHAM	Mudhuvenil kalam	Kaar kalam	Koothir kalam	Vatha disease is more prevalent in **Neidhal** land
PITHAM	Kaar kalam	Koothir kalam	Munpani	Pitha disease is more prevalent in **Mullai** land
KAPHAM	Pinpani	Elavenil kalam	Mudhuvenil kalam	Kaphadisease is more prevalent in **Kurunchi** land

UDAL VANMAI (IMMUNITY):

Siddhars classify Udal vanmai as three types. They are

1. Iyarkai vanmai
2. Kala vanmai
3. Seyarkai vanmai

Since Kumbavatham patients are suffering with pain as principal symptom, we came to understand that it is because of alteration in Vali thathu and Vali should be the primary causative factor (Muthanmai kutram). It can be confirmed by the words of great Siddhar Therayer

NOI KANIPPU VIVADHAM (Differential Diagnosis)

There are certain vatha noigal which resembles the clinical symptoms of Kumbavatham. They are,

1. Sagana vatham
2. Paanikambavatham
3. Sirakamba Vatham
4. Pei Vatham
5. Kanda Kiraga vatham

1. SAGANAVATHAM:

“கேளுமே கழுத்தின் கீழரைக்கு மேலும்
கெடியான கரமிரண்டு மிகவே நொந்து
வாளுமே சரீரமெல்லாங் கனத்திருக்கும்
வாலிபர்க்கு மனங்கண்ணு மயக்கமாகும்
ஏளுமே இரண்டு கண்ணும் எரிச்சலுண்டாம்
ஏற்றமாய் மலந்தானும் இறுகிக் காணும்
தேளுமே கொட்டினது போற் கடுக்கும்
செகன வாதத்தினிடந் தீர்கந்தானே”.

– யூகி வைத்திய சிந்தாமணி

Pain in the neck, Radiating pain to the shoulders and upper limb, heaviness of the body, mental depression, giddiness, irritation of eyes, constipation, Tingling sensation.

2. PAANIKAMBA VATHAM:

"மார்க்கமாய் வாய்வுமாய் ….
நடுக்கமாய் கையிரண்டுந் திமிரு முண்டாம்
……. துணர்ச்சி யற்று
பாணி கம்பவாதத்தின் பாங்கு தானே"

– யூகி வைத்திய சிந்தாமணி 800

Tingling sensation numbness of upper limbs

3. SIRKAMBA VATHAM:

தம்பமாய் உதிரகண்ட நரம்பிற் புக்கித்
தலையோடு சாரமெலாந் தாக்கிப் புக்கும்…..
கையோடு காலிரண்டும் வசக்கேடாகும்…….
சிம்பமாய் தலை நடுங்கி ….
சிரக்கம்ப வாதமென்றே செப்பலாமே"

– யூகி வைத்திய சிந்தாமணி 800

Stiffness of the neck, Tremor in the head and neck and diffuclty in using upper and lower limbs.

4. PEI VATHAM:

"பெற்றியாம்பெருமையாங் காலுங் கையுங்
பெருவயிறு நெஞ்சோடு விரலு மூக்கும்

ஏற்றியா மெறிகழுத்து மெங்கும் பற்றி

ஏக்கமாய் நொந்துடம் பெங்கும் வீங்கி

உற்றியா மூணவே திமிர்த் தெடுத்து

உறுதியாய்ப் பிடிக்கவுமொணாம லாகும்

சத்தியமாய் வாய்கசந்து மயக்கமாகுந்

தரித்திட வெண்ணாதுபேய் வாதந் தானே".

– யூகி வைத்திய சிந்தாமணி 800

- ❖ Pain & Swelling in neck, Upper and lower limbs.
- ❖ Weakness of hand muscles and difficulty in holding thing in the hand.
- ❖ Vomitting, giddiness and swelling over the body.

5. KANDA KIRAAGA VATHAM:

"வகையான குரலதனைப் பற்றி நொந்து

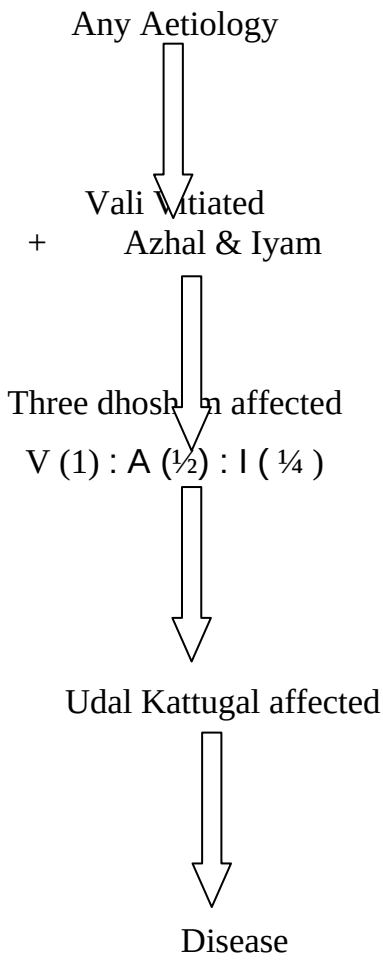
மாபோடு பிடரியினில் வலியுண்டாகி ....

..... கண்ட கிராகத்தின் பண்புதானே"

– யூகி வைத்திய சிந்தமாணி 800

Pain in the throat, Chest and occipital region pain, numbness Tingling sensation over the neck both upper limbs. Stiffness in the neck, burning sensation in the eyes, difficulty in holding things in hands are the similar symptoms like Sagana Vatham.

MUKKUTRA VERUPADUGAL (PATHOGENESIS)



PINIYARI MURAIMAI (DIAGNOSIS):

It means the method of diagnosing the disease.

"மதித்திடற்கருமை வாய்ந்த
மாண்பரிகாரமெல்லாந்
துதித்திட வுணர்ந்தானேனுந்
துகளறப் பணியின்றன்மை
பதித்திட வுணரானாகிற்
பயனுறானாகாலானே
விதித்திடு பிணித்திறத்தை
விளம்புது முதற்கண்மன்னோ"

- சிகிச்சா ரத்தினதீபம்- பக்கம் 3

The above poem describes that diagnosis is very important for the physician to treat the disease.

And,

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Four steps are followed in diagnosing the disease. They are,

a. Poriyaal arithal
b. Pulanal therthal
c. Vinaathal
d. Envagaithervu

In detail,

a. Poriyaal arithal:

In this the physician should carefully observe the changes that occur in the five sensory organs (Porigal) of the patient.

b.Pulanal therthal:

The physician carefully applies his five senses of perception, smell, taste, vision, touch and sound to understand the condition of the patient.

c.Vinaathal:

The physician should interrogate about the patients name, age, occupation,socio economic status, food habits, history of past illness, history of present illness, family history, marital status, menstrual history and frequency of pain.

ENVAGAI THERVUKAL

"நா நிறம் மொழி விழி மலமூத்திரம்
நாடி பரிசமிவை மருத்துவராயுதம்"

-நோய்நாடல் நோய் முதனாடல்-253

¿¡ÊÂ¡ø Ó ý §É¡÷ ¦º¡ ý É ¿ø¦Ä¡Ä À¡ºò¾¡Öõ
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Nowadays advanced diagnostic tools have been developed by modern bio-medical scientists. But Siddhars have given eight diagnostic methodological tools. They are called as Envagai thervu.

Eight fold system of clinical assessments

Siddhars have given eight diagnostic methodological tools. They are,

1. Naa
2. Niram
3. Mozhi
4. Vizhi
5. Malam
6. Moothiram
7. Naadi
8. Parisam

GENERAL FINDINGS:

1. **NAA:**
    i. Signs and symptoms in the tongue are noted here.
    ii. Color, salivary secretion, ulcers, coating, inflammation, taste changes, deviation and its nature are generally noted.

In *Kumbavatham* the naa may be affected due to the pallor of the tongue

2. NIRAM:

The color of the skin is noted here.

3. **MOZHI:**

Character of the speech is noted, mainly uratha olli(high pitched), thazhntha olli(low pitched), or resembles the sound of any instrument.

4. VIZHI:

Character of the eye is noted. Color, Warm, Burning Sensation, Irritation, Visual Perception.

5. MALAM:

The stools are examined for quantity; hardening (malakattu), loose motion (bethi), Color and smell.

6. **MOOTHIRAM:**

A. NEERKURI:

The urine is examined for its color, odour, volume, froth and weight.

B.NEIKURI

"அருந்து மாறி ரதமும் அவிரோதமதாய்
அக்கல் அலர்தல்அகாலவூன் தவிர்தழற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக்கலசத் தாவியே காதுபெய்
தொருமுகூர்த்தக் கலைக்குட்படு நீரின்
நிறக்குறி நெய்குறி நிருமித்தல் கடனே"

-சித்த மருத்துவாங்கச் சுருக்கம் - பக்கம்509

The early morning urine of the patient is analyzed by dropping a drop of gingely oil on the surface of the urine sample. The accumulation, formations, changes, and dispersal under the sunlight without any external disturbances of the urine sample can be noted.

- Vatha neer - The oil spreads like snake
- Pitha neer - The oil spreads like ring
- Kapha neer - The oil spreads like pearl
- If the oil spreads gradually, it indicates good prognosis

- If the oil spreads fast or gets mixed completely with urine or sinks in urine, it suggests bad prognosis.

7. NAADI:

Naadi is a Unique Siddha Pulse reading method and it should be felt and not read. Different gaits of Vazhi , Azhal, Iyam like branching, jumping, mixing, rotating and compression can be identified.

NAADI NADAI:

IDENTIFICATION (FINGER)		**INDEX**	**MIDDLE**	**RING**
STRENGTH (IN UNIT)		1	1|2	1|4
PATTERN	**MALE**	Hen	Tortoise	Snake
	FEMALE	Snake	Frog	Swan

"பார்க்கவே பெண்களுக் கிடதுபக்கம்
பதிவாகப் பார்த்திடவே பகரபக்கேளும்
கார்கவே வாதமது சர்ப்பம் போலாய்

கனமான பித்தமது தவளை போலாஞ்
சேர்க்கவே யையமென்ற நாடிதானுஞ்
சிறுநடையா வன்னம் போற் செழிப்பாய்க் கானும்”

-பதிணென் சித்தர் நாடிசாத்திரம் (பரிபூரண நாடி)-பக்கம்2

Vatha naadi:

“வாதமெனும் நாடியது தோன்றிற் சீதம்’...
திரள்வாயு சூலை வலிக்கடுப்புத் திரை”

- சதக நாடி
- நோய்நாடல் நோய் முதனாடல்253

Vatha pitham:

“திருத்தமாம் வாதத்தோடே தமிங்கொடு பித்தஞ் சேரில்
பொருத்துகள் தோறும் நொந்து போதவே பிடிக்குஞ் சூலை”

- குணவாகட நாடி(அகத்தியர்)-பாடல் 26

In Kumbavatham the Naadi can be vatha naadi and vatha pitham naadi

8. PARISAM:

Observations as touch, temperature, sensory impairment, masses, nodes, swelling, and texture of the skin, pain, hardness, edematous, and dullness shall be noted.

LINE OF TREATMENT:

1. To bring the three Kutrams in equilibrium
2. Medicines (Int)
3. Diet and advises
4. Thokkanam, Otradam, Patru
5. Yoga
6. Suttigai
7. Kanmanivarthy

1. Since *Kumbavatham* is belongs to Vatha disease, purgative is given to balance the Vatham.

"விரேசனத்தால் வாதம் தாழும்"

2.MEDICINE: **Kanthaga Parpam:**

- 200 mg, Twice Daily.

- With Honey. afterfood

DURATION OF TREATMENT:

20 days medicine with ichapathiyam,

3. DIET AND ADVICES:

Pathiyam (Diet Regimen)

During the course of treatment according to the nature of illness and the drug administered. The patient were advised to follow certain special dieting methods called "PATHIYAM". The importance of Pathiyam is clearly mentioned by Theraiyar as follows:

"பத்தியத்தினாலே பலனுண்டாகும் மருந்து
பத்தியங்கள் போனால் பலன் போகும் – பத்தியத்தில்
பத்தியமே வெற்றி தரும் பண்டிதருகாதலினாற்
பத்தியமே உறுதியென்று பார்".

- தேரையர் வெண்பா பக்கம் 159

Three types of Pathiyam are commonly told. They are Kadum Pathiyam, Miga Kadum Pathiyam, Ichcha Pathiyam and Uppilla Pathiyam (salt free dieting) also mentioned in ancient + Siddha literatures especially for the mercurial preparations of drugs.

Pathiam is sensitive to the body towards good drug response and Cope up with the drug avoiding manifestation of adverse effects.

Vali (வளி **) Roga Pathiyam:**

"பு ளிதுவர் விஞ்சுங் கறியாற் பூரிக்கும் வாதம்''

- கண்ணுசாமியகம்

Tamarind and Astringent increase Vali (வளி) . So kumba vatham patients were advised to avoid these things.

In Pathartha Guna Chindamani

கடுக நற்றிலத் தெண்ணெய் கூழ்பாண்டங்கள் கடலை
வடுகதாகிய தெங்கமா வருக்கை நற்காயம்
மடிவிலாத வெள்ளுள்ளி கொள் புகையிலை மதுபெண்
இடறுபாகலோ டகத்தி நீக்கிடலிச் சாபத்தியம்"

– பதார்த்த குண சிந்தாமணி

இச்சாபத்தியம் – நீக்கும் பொருட்கள்

கடுகு, எள்நெய், கலியாணபூசணி, கடலை, தேங்காய், மாங்காய், பலா, காயம், பூண்டு, கொள், புகையிலை, பெண்கள், பாகல், அகத்தி முதலியன.

வளிநோயாளர்களின் பத்தியம்:

"செங்கழுநீர் கோட்டந்தேன் மிளகு நல்லெண்ணெய்
தங்குபெருங் காயந் தழுதாழை யெங்கெங்குங்
கூட்டு சிறு முத்துநெய் கோதி வழந்திவைகள்
வாட்டு மணிலத்தை மதி".

–பதார்த்த குண சிந்தாமணி

ப.369

"மாட்டு பறங்கி வங்க மான்.. ...
வாததே கிர்க்கிரசமும் வை".

செங்கழுநீர், கோஷ்டம், பெருங்காயம், தேன், மிளகு, நல்லெண்ணெய், தழுதாழை, சிற்றாமணக்கு நெய், உளுந்து, கல்யாணபூசணி, வழுதமனங்காய், வெள்ளவரக்காய், காராக்கருணை, குப்பைமேனி, முன்னை, ஆரை, நல்வேளை, மணித்தக்காளி, யானை நெருஞ்சில், முசுமுசுக்கை, கோவை, பசலை, கத்தரிக்காய், முருங்கை பிஞ்சு, பாகல் பிஞ்சு, காட்டுக் கருணை.

4. THIOKKANAM (MASSAGE THERAPY)

Thokkanam is systemic manipulation of the body parts by the physician.

"தொக்கணத்தினா லிரத்தம் தோல் ஊனிவை கட்கு
மிக்க சவுக்கியம் சமீரனும் போம் – மெய்க்கதிக
புட்டியுறக்கம் புணர்ச்சி யிவை கதிக்கும்
பட்ட அலைச்சலறும் பார்".

– பதார்த்த குண சிந்தாமணி

Thokkanam acts directly on vascular system, nervous system, lymphatic and muscuto skeletal system and brings the affected body to normal condition physically and mentally. It also gives sense of well being, gives a good sleep and increase vital power and also provides relaxation.

Vali **(வளி)** diseases are relieved specially by Thokkanam by below quotos,

"மத்தனமாகிய தொக்கணத்தின் செயல் வகுப்பானே– சதா
நித்தமும் வாதம் பிணித்த பிணிப்பை செகுப்பேனே.

– தே.மகா.கரிசல்

In nine types of Thokkanam. These are all the two methods used in kumba vatham

1. **Pidiththal** (effleurage and pettriasage)
2. **Izhuththal** (Traction)

In Pidiththal, strokes are slided smoothly and by kneeing. In Izhuththal traction like method is performed.

Physical:

Rubbing of the body produces heat and increases blood circulation. It gives more oxygen to all parts of the body & flushing out waste gases and toxins.

Phyche :

Through touch, massage works on the nervous system and increases the circulation of growth hormones.

Massage gives relief from headache, muscleache anxiety, weakness, irritability, feelings of insecurity and in the Non-drug method for sleep.

Massage also increases the production of WBC antibodies & helps in defense mechanism to increases the immunity.

5. YOGA THERAPY.

Yoga is India's unique contribution to the world. Yoga therefore is an art which brings an incoherent and scattered mind to a reflective and coherent state. Thirumanthiram is the oldest text in Yoga. It enumerates the means of Yoga as"Astanga Yoga" or stages of Yoga for the realization of the soul.

They are:

Iyama	:	Observances
Niyama	:	Restraints
Asanas	:	Postures
Pranayama	:	Rhythmic Control of breath
Prathyahara	:	Withdrawals and emancipation of the mind from the domination of senses and exterior objects
Dharana	:	Concentration
Dhyana	:	Meditation

Samathi : A state of superior consciousness brought about by profound meditation in which the individual aspirant becomes one with cosmic consciousness.

Yoga has a massage for the human body, mind and also for the human body, mind and also for the human soul.

A.Therapeutic Yoga:

It is basically a system of self treatment. Yogasanas are reliable supportive therapy or sometimes plays main part of the treatment of Vali diseases. The yogasanas are useful not only to revive the body but also strengthen the nervous system, locomotor and digestive systems. It regenerate the endocrine system. They bring the human body under the complete control of mind.

The following asanas are advised to the patients to relive from the symptoms of kumbavatham.

1. Pujankaasana:

Helps in keeping the dorsal spine elastic and strong. Back ache due to over strain can be relieved. Helps in considerable reduction of abdominal fat.

2. Maharasana:

It gives complete relaxation to the muscles and is useful in Hypertension Insommia etc.

3. Savasana:

For sound sleep and restoring mental peace. These asanas can be done after the neck pain is reduced considerably with drug treatment.

B. Piraanaayaamam:

Piraanaa means vital force or breath. Aiama means the control of the piraanan. Regular practice of Piraanaayaamam and Asanaas combined with control of the mind they will combat negative elements such as ignorance, Lazziness, inertia and over excitement as well as increasing the will power.

The main object of piraanaayaamam is to acquire mastery of the vital force acting with in the body. It improves the functions of Piraanan, nourishes the body cells, purifies blood and tones up nerves.

In cases of Kumba Vatham, Piraanaayaamam corrects the disturbed piraanan tones up the nerves of affected area.

C. Thiyanam (Meditation):

Thiyaanam the continuous flow of the mind towards, "Aathma" through the total exclusion of all ideas foreign to it. The principal disciplines for thiyaanam are Iyamam and Niyamam.

Iyamam – Includes non violence, truthfulness, non stealing, sensation of all women as mother's and sisters except wife and not speaking and doing useless matters.

Niyamam- It means outer and inner purity, contentment, austerities, study of scripture and devotion to god. By Thiyanam man can know himself.

So it is helpful in stressful mental conditions and gives relaxation to mind.

In cases of kumba vatham, Thiyaanam gives complete rest to the body including neck and provides relaxation.

6. SUTTIGAI:-

It is the process to give heat in some particular varma part of the body for the curation of the disease.

In Varma Vidhi :

பாரிச வாதஞ் சன்னி வாதம்...
மருவுமெண் பத்து நான்கு வாதத்திற் கிரட்சை கேண்மின்
பொருவிலா வுச்சி மீதிற் புகன்றிடு குறுக்குச் சூடும்
தருநெற்றி நெறியிற் பொட்டுந் தான் சுடச் சாலநன்றே
பாடல் 32

சாலவே பிடரிமூட்டின் மேல்நோக்கி பிறைபோற்சூடும்
மேலுமுன் கைக்கு மேலே யிரண்டிடம் பொட்டுச் சூடும்.

பாடல் 23

For curation of vadha diseases there is applying of suttigai on the head, forehead, occipital region, forearm with Eratchai instrument.

7. KANMA NEEKKAM (EXPIATION)

Kanmam means the deed which are committed by an individual in this and previous births . So, he must expiate it to get better relief before the treatment.

"நலியாலே வந்த கன்மம் தீரவென்றால்
நன்மரங்கள் தோப்பு நடைசாலை வைத்தல்
தெளிவான கிணறு வெட்டல் குளங்கள் வெட்டல்
தெய்ப்பதலம் கோயில் கட்டத் தீரும் பாடு
எளிதான பாலகர்க் காபரண மீதல்
என்பதென்ற வாதமெல்லா விடந்து போகும்
பழியான நோய் வந்தா லிப்படியே செய்து
பரிவாக வைத்தியத்தைப் பிறகு செய்யே"

– அகத்தியர் கன்ம காண்டம் 300

Planting the young trees, establishing the gardens laying roads and pathways, Digging wells, ponds for public use, constructing temples and Donates to poor children must be done.

PATHIYAM AND APATHIYAM:

A. Pathiyam(diet):

Diet:

The food must bring the vatha under the control

Food like kanji, tender vegetables of brinjal, beans, fig and some greens which is useful in vatha diseases.

In dal types only dhoor dal is preferable.

B. Apathiyam(Avoid):

- In vegetables which is rich in water content like Surai, poosani, vellari, pudalai, peerku.
- In grams like karamani, ulunthu, kollu and mustard
- Underground tubers**.**

ADVICE:

Avoid sleeping in open or moisturised air.

PREVENTION:

- ✓ Balanced & Low fat diet
- ✓ Regular exercise
- ✓ Suriya namesakaram
- ✓ Oil bath twice in a week
- ✓ Avoid Junk foods
- ✓ Avoid tobacco, Alcohol

Modern Aspects

MODERN ASPECT

Periarthritis or Frozen Shoulder

DEFINITION

Periarthritis of the shoulder is a chronic, retrograde and inflammatory disease of the shoulder joint, capsule and the soft tissues surrounding it. This pathology is mostly due to exposure to cold, trauma, or chronic strain of the shoulder. The main clinical manifestations are soreness and dysfunction of the shoulder. The disease is usually found in patients above the age of 50.

SYMPTOMS

Pain is the most obvious symptoms, the gradual emergence of a shoulder at the pain, and body movements, gestures as significant. With the extended duration of pain was expanded and involved the middle upper arm, and shoulder joint with limitation of activity. the extent and nature of pain big difference, or dull, or knife-like, For increased range, there are severe sharp pain occurs. severe limb can not comb the hair, face wash, and buckle belt. night stand movement because of pain in the shoulder and wake up. This can cause pain, persistent muscle spasms, muscle cramps and some light, some heavy, pain and muscle spasms can be confined to the shoulder, you can also up after radiation to the head, wrist and fingers reach down , and some radiation to the shoulder blades back, forward to the chest; also some radiation to radiate into the triceps or deltoid, biceps direct radial forearm wide range of frozen shoulder tenderness. due to illness in different parts of tender points and tenderness to the degree of inconsistency, the patient initially still capable of that pain point, late expanded to feel pain in the humerus.

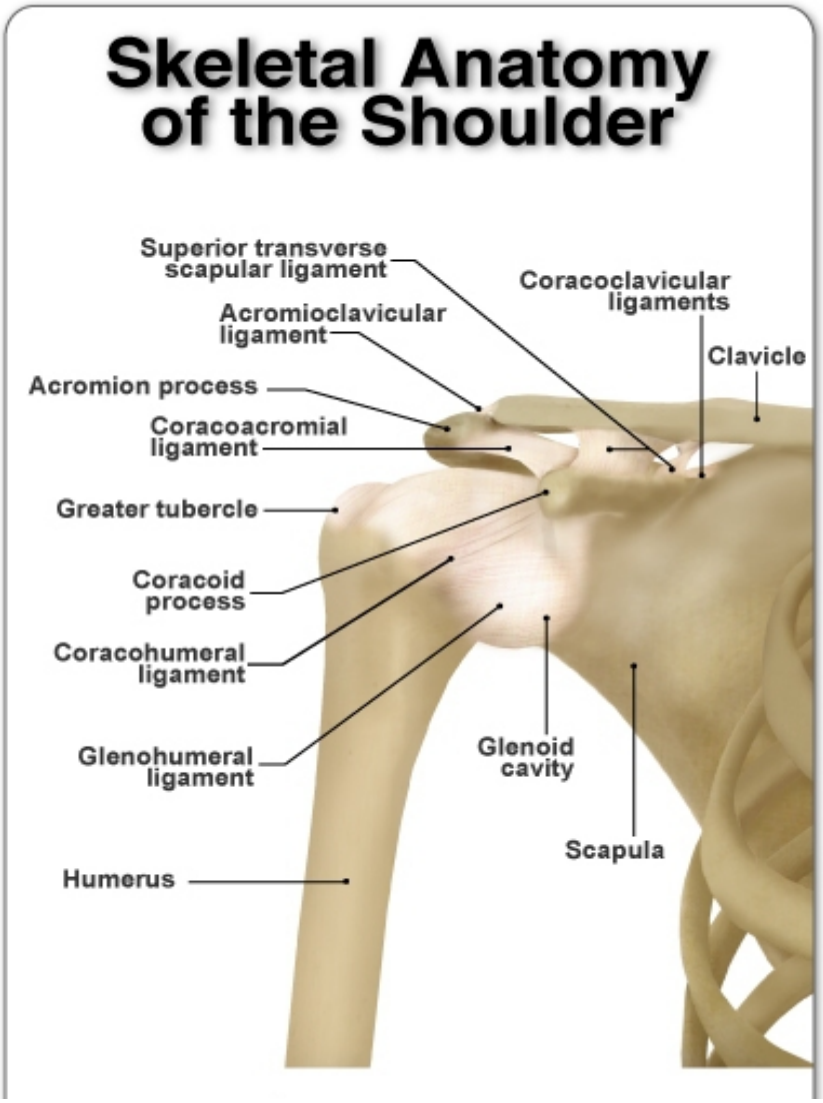
Shoulder Joint Anatomy

The Shoulder Joint

This is a multiaxial **ball and socket type of synovial joint** that permits a wide range of movement. However, mobility is gained at the expense of stability. The human shoulder is the most mobile joint in the body.This mobility provides the upper extremity with tremendous range of motion such as adduction, abduction, flexion, extension, internal rotation, external rotation, and 360° circumduction in the sagittal plane. Furthermore, the shoulder allows for scapular protraction, retraction, elevation, and depression. This wide range of motion also makes the shoulder joint unstable. This instability is compensated for by rotator cuff muscles, tendons, ligaments, and the glenoid labrum..

The shoulder or pectoral girdle is composed of the bones that connect the upper extremity to the axial skeleton. Two bones comprise the shoulder girdle. These are the clavicle and scapula.

SKELETAL ANATOMY OF THE SHOULDER



Osteology

Scapula

The scapula is a triangular-shaped bone that functions mainly as a site for muscle attachment. Four rotator cuff muscles that act on the shoulder take their origin from the scapula. These are the supraspinatus, infraspinatus, teres minor, and subscapularis

Additionally, the trapezius, serratus anterior, rhomboids, and levator scapulae insert on the scapula and are responsible for scapular mobility and stability. The scapula is freely moveable, because it is suspended by these muscles. The scapula has 4 processes, the spine, the acromion, the coracoid, and the glenoid. The glenoid cavity (or, alternatively, the glenoid fossa) is set on the expanded aspect of the lateral angle of the scapula. The glenoid cavity is an irregularly shaped oval and has been compared to an inverted comma shape. It articulates with the head of the humerus, forming the glenohumeral joint, which serves as the main joint of the shoulder.

Clavicle

The clavicle is an S-shaped bone that forms the anterior portion of the shoulder girdle that keeps the arm away from the trunk, allowing it to move freely. The clavicle has 2 articulations, the sternoclavicular joint and the acromioclavicular joint. The sternoclavicular joint is formed by the medial aspect of the clavicle articulating with the manubrium of the sternum. This is the only skeletal connection between the axial skeleton and the upper extremity. Furthermore, the clavicle provides protection for the subclavian artery, subclavian vein, and brachial plexus posteriorly and inferiorly.

Humeral head

The proximal articular surface of the humerus is termed the humeral head. The humeral head articulates against the shallow glenoid cavity. Only 25% of the humeral head surface makes contact with the glenoid cavity. The glenoid labrum, a fibrocartilaginous ring attached to the outer rim of the glenoid cavity, provides additional depth and stability.

Articulations

Sternoclavicular joint

The sternoclavicular joint is the sole connection between the axial skeleton and the upper extremity. The sternoclavicular joint allows 30-35 º of upward elevation, 35 º of anteroposterior movement, and 44-50 º of rotation about the long axis of the clavicle.

Acromioclavicular joint

The acromioclavicular (AC) joint is the only articulation between the clavicle and scapula. It is formed by the distal clavicle articulating with the acromion of the scapula. Little motion exists in this joint. The AC joint is an encapsulated diarthrodial joint held together by its joint capsule and the coracoacromial ligaments: the trapezoid and conoid ligaments.

Glenohumeral joint

The glenohumeral joint is the main articulation of the shoulder joint. It is the multiaxial ball-and-socket synovial joint formed by the articular surfaces of the glenoid cavity and the head of the humerus. The glenoid cavity depth is increased by a rim of fibrocartilage that surrounds it. This rim of fibrocartilage is the glenoid labrum.

Labrum

The glenoid labrum is a ring composed of mostly dense fibrous tissue. The average depth of the glenoid cavity is 2.5 mm, but the labrum serves to increase this depth. Although the labrum increases the depth and volume of the glenoid cavity, it does not seem to increase the stability of the glenohumeral joint.

Ligaments

Coracoclavicular

The conoid and trapezoid ligaments comprise the coracoclavicular ligaments (CCLs) . They function to maintain the articulation of the clavicle with the coracoid process of the scapula. Studies have concluded that the coracoclavicular ligaments are the primary restraint to superior and posterior clavicular dislocation.

Glenohumeral

Three glenohumeral ligaments exist: (1) the superior glenohumeral ligament (SGHL), (2) the middle glenohumeral ligament (MGHL), and (3) the inferior glenohumeral ligament (IGHL). The SGHL has a variable origin and inserts on the humerus near the lesser tubercle; this ligament resists inferior translation of the humeral head in the adducted shoulder. The MGHL originates from the labrum and inserts on the humerus medial to the lesser tubercle; this ligament resists inferior translation in the adducted and externally rotated shoulder. The IGHL originates from the labrum and the adjacent glenoid neck, inserts on the anatomic neck of the humerus, and resists humeral head anterior and posterior translation. Furthermore, the IGHL is the primary restraint to inferior dislocation in the abducted shoulder.

Coracohumeral

The coracohumeral ligament (CHL) originates on the base and lateral border of the coracoid process of the scapula and inserts on the greater tubercle. The biomechanical function of this ligament is not fully understood; however, it appears to have suspensory function of the humeral head.

Rotator cuff

The supraspinatus, infraspinatus, teres minor, and subscapularis muscles comprise the rotator cuff . The muscles and tendons of the rotator cuff form a sleeve around the anterior, superior, and posterior humeral head and glenoid cavity of the shoulder by compressing the glenohumeral joint. In addition to stabilization, the rotator cuff provides the shoulder with tremendous mobility.

Table 1. Origins, Insertions, Actions, and Nerve Supplies of the Rotator Cuff Muscles.

Muscle	Origin	Insertion	Action	Nerve Supply
Supraspinatus	Supraspinous fossa	Greater tubercle of humerus	Abduction of the arm to approximately 30°	Suprascapular nerve
Infraspinatus	Infraspinous	Greater	External	Suprascapular

	fossa	tubercle of humerus	(lateral)rotation of the arm	nerve
Teres minor	Upper 2/3 of the lateral border of the scapula	Greater tubercle of humerus	External (lateral) rotation of the arm	Axillary nerve
Subscapularis	Subscapular fossa on the anterior surface of the scapula	Lesser tubercle of humerus	Internal (medial) rotation of the arm	Upper and lower subscapular nerves

Bursae around the Shoulder Joint

The Subscapular Bursa

- This bursa is located lies between the tendon of the subscapularis muscle and the neck of the scapula.

- The bursa protects this tendon where it passes inferior to the root of the coracoid process and over the neck of the scapula.
- It usually communicates with the cavity of the shoulder joint through an opening in its fibrous capsule; thus it is really an extension of the cavity of the shoulder joint.

The Subacromial Bursa

- This is a larger bursa that lies between the deltoid muscle, the supraspinatus tendon, and the fibrous capsule of the shoulder joint. Its size varies, but it does not normally communicate with the cavity of the shoulder joint.

- The subacromial bursa is located inferior to the acromion and the coracoacromial ligament, between them and the supraspinatus muscle.

The subdeltoid bursa

- The subacromial bursa lies on the superior aspect of the supraspinatus tendon .
- The bursa acts to cushion and reduce friction during motion between the overlying bone of the acromion and the soft rotator cuff muscles below.
- It often extends laterally to be continuous with the subdeltoid bursa.

Blood Supply to the Shoulder Joint

- The articular arteries to the shoulder joint are branches of the anterior and posterior **circumflex humeral arteries** from the axillary and the suprascapular artery from the subclavian.

Nerve Supply of the Shoulder Joint

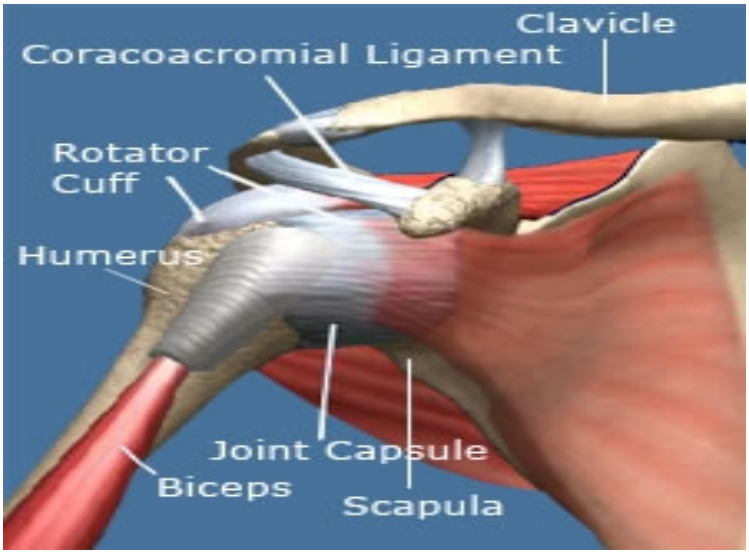
- The articular nerves are branches of the suprascapular, axillary, and lateral pectoral nerves.

Stability of the Shoulder Joint

- The free movement of this joint leads to instability.

- The shallowness of the glenoid cavity and the laxity of the fibrous capsule also result in a considerable loss of stability.

- The strength of the joint results mainly from the muscles that surround it, particularly the **rotator cuff muscles** (supraspinatus, infraspinatus, teres minor andsubscapularis).
- These four scapular muscles, joining the scapula to the humerus, are attached near the articular areas of the articulation and are closely related to the fibrous capsule of the joint.
- Although they have separate functions, the **rotator cuff muscles work as a group in holding the head of the humerus in the glenoid fossa**.



- The supraspinatus muscle and the coracoacromial arch guard the shoulder joint superiorly; the infraspinatus and teres minor muscle stabilise it posteriorly; and the subscapularis muscle protects it anteriorly.
- There is no tendinous support of the shoulder joint inferiorly; consequently, this is where it usually dislocates.

Movements of the Shoulder Joint

- This joint has more freedom of movement that any other joint in the body.
- This freedom results from the laxity of the joint's articular capsule and the large size of the humeral head compared the small size of the glenoid cavity.

- The shoulder articulation is a **multiaxial ball-and-socket joint** that allows movements around three axes and permits flexion-extension, abduction-adduction, circumduction, and rotation.
- In circumduction, the distal end of the humerus describes the base of a cone, the apex of which is the head of the humerus.

Natural Variants

Labrum, clavicle, and scapular notch variability

Several minor anatomic variations exist in the attachment sites, size, and histologic composition of the labrum. These variations are not considered pathologic.

Variations in the shape of the clavicle are considered normal and are not usually pathologic. These variations may range from an almost straight bone to one with exaggerated curves. Another variation of the clavicle that is present in 6-10% of the population is termed the canalis nervi supraclavicularis. In this variation, a foramen forms through the clavicle, and the medial supraclavicular nerve passes through this accessory osseous canal.

The scapular notch varies in size and shape. The notch is bridged by the superior transverse scapular ligament. This ligament ossifies in 10% of patients, producing a bony foramen for the suprascapular nerve.

Pathophysiological Variants

Acromion morphology variability

Bigliani et al separated acromions into 3 categories based on their shape and their correlation with rotator cuff tears , as follows:

- Type I: Flat undersurface of the acromion (This type has the lowest risk for impingement syndrome.)
- Type II: Curved undersurface of the acromion
- Type III: Hooked undersurface of the acromion (This type has the highest correlation with subacromial pathology.)Acromion types.

Acute Shoulder Injury

Glenohumeral dislocation

The glenohumeral joint is the major articulation of the shoulder joint. Dislocation of the glenohumeral joint occurs when the humeral head is moved out of contact with the glenoid cavity. Almost 85% of shoulder dislocations are anterior dislocations.An anterior dislocation is likely to occur when the arm is abducted, extended, and externally rotated. Posterior dislocation of the glenohumeral joint is rare but is more likely to occur when the arm is adducted and internally (medially) rotated. Violent muscle contractions during a seizure or electrocution may also produce a posterior glenohumeral dislocation.

Acromioclavicular joint sprain or dislocation (shoulder separation)

The AC joint is frequently injured in athletes. The injury commonly occurs when direct force is applied to the acromion with the arm adducted. The force causes the acromion to suddenly move inferiorly, which first strains or tears the AC ligaments and may subsequently strain or tear the coracoclavicular ligaments as well.

Rotator cuff tear

Rotator cuff tears are common injuries; such a diagnosis indicates one or more of the rotator cuff tendons have torn. The injury may be result of chronic impingement and tendonitis that has progressed, or it may refer to an acute injury such as a fall or direct trauma. People with a rotator cuff tear may experience pain and weakness in their shoulder.

Subacromial/subdeltoid bursitis

Inflammation of the bursa is relatively rare but may occur.

Labral tear

People that participate in repetitive overhead activities such as swimming or throwing a ball have an increased risk of labral tear. A labral tear may be asymptomatic or manifest as shoulder instability, pain, or crepitus.

Glenohumeral osteoarthritis

Glenohumeral osteoarthritis is a slowly progressive arthropathy that is caused by the loss or destruction of articular cartilage. This is usually a condition that develops as people age and their articular cartilage wears down. However, it can also be due to trauma such as a humeral head fracture, shoulder dislocation, or rotator cuff tendon tears.

Adhesive capsulitis

Primary adhesive capsulitis causes a painful and stiff shoulder usually without a known inciting event. The stiff glenohumeral joint is most likely a result of chronic inflammation and fibrosis. Adhesive capsulitis has 3 phases, and each phase typically lasts 4-6 weeks, with wide variability. The 3 phases are as follows:

1. "Freezing phase": Spontaneous pain and stiffness in the shoulder
2. "Frozen phase": Increased stiffness and stable or decreased pain
3. "Thawing phase": Increased range of motion and decreased pain.

INVESTIGATION

Investigations for Periarthritis

Periarthritis is mostly diagnosed clinically, ie from what the patient tells us and what the doctor finds in the examination.

However, investigations are performed to exclude other diagnoses and to identify more closely the exact nature of the problem.

X-rays

X-rays of the shoulder are normal in appearance, with perhaps some loss of bone density due to not using the area.

OTHER INVESTIGATION:

Arthrogram

This investigation involves the injection of dye into the joint, a special dye which shows up on an xray. The dye fills the joint and so shows up a normal or a tight and contracted joint space. In frozen shoulder the space of the joint is much reduced and this shows on the xray film.

MRI scanning

This has not shown up any significant or diagnostic changes which would be of help.

C.T. scan:

Confirms degenerative changes

Arthroscopy

Arthroscopic examination (keyhole surgery) of the shoulder joint allows the surgeon to see directly what has happened to the tissues inside the joint. The major abnormal finding is a scarring up of one of the areas in the front of the shoulder joint.

A fold of the shoulder capsule in the armpit area is also contracted up but there are no adhesions as such in the joint. A tightening up of a major joint structure, the coracohumeral ligament, may be the main lesion in people with frozen shoulder.

Exercise for shoulder:

- Arms lift forwards up and down 5 times increase to 7 – 10 times.
- Arms lift side ways, up and down – 5 times increase to 7 – 10 times.
- Arms life forwards, part and together – 5 times increase to 7 – 10 times.
- Fingers on the shoulder with elbow bent:
    a. elbows circling forwards, upwards, backwards & downwards – 5 times increase to 7 – 10 times.
    b. Elbows circling backwards, upwards, forwards & downwards - 5 times increase to 7 – 10 times.
- Shoulders bracking – 5 times increase to 7 – 10 times.

- Right hand meeting left hand at the back (Right hand to be carried above the Right shoulder, left hand carried from the left side at the back and try to touch the right hand.
- Repeat the left hand carried above the left shoulder and the right hand turned in carried from the side of trunk – 3 times each side, increase to 5 – 7 times.

Trial drugs

LITERATURE REVIEW OF TRIAL DRUGS

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PURIFIED

Materials & Methods

METERIALS AND METHODS

PROTOCOL

Introduction:

The clinical trial for PERIARTHRITIS was decided to be conducted as an open label study.

Data collection:

- Literary evidence from various
- Siddha books
- Medical journals
- Internet

Trial spot:

The entire study was conducted on patients on attending the OPD and IP of Government Siddha Medical College, Aringnar Anna Hospital Of Indian Medicine Campus , Arumbakkam, Chennai- 106 , during the period 2010-2013.

Population:

It is usually occurs to people who are above the age of 50.To estimate the Periarthritis has a 2% prevalence in general population.

The population consists of periarthritis patients satisfying the inclusion and exclusion criteria mentioned below.

INCLUSION CRITERIA

1. Age: Between 45 - 60 years.
2. Willing to give specimen of blood for investigation when required.
3. Willing to attend the OPD once in 7 days
4. Adhere to protocol requirements with written informed consent.

EXCLUSION CRITERIA:

1. Injury

2. Diabetes Mellitus
3. Hemiplegia
4. Cardiac ischemia
5. Gall bladder stone

Duration of Treatment:

- 20 days.

Patients were followed under the guidance and supervision of the HOD, Professor, Reader, Lecturer and Asst. Lecturer of the Maruthuvam P.G Department, GSMC, Chennai-106.

40 patients were selected and carefully studied for their history, clinical examinations, investigations and management.

Evaluation of Clinical Parameters:

The history includes past, personal, family, occupation, dietary habits, Seasonal history, and associated history.

Investigations:

- **Blood**
  - TC,
  - DC,
  - ESR,
  - HB,
  - Blood sugar,
  - Blood Urea
  - Serum Cholesterol
  - Serum Creatinine
- **Urine:**
  - Albumin
  - Sugar

- Deposit

❖ **X- ray:**

- Shoulder joints

  Antroposterior (AP) view & Lateral view

Investigations Based On Siddha System*:*

1. *Envagai Thervu:*

   Na, Niram, Mozhi, Vizhi, Sparisam, Naadi, Malam, Moothiram

2. *Neerkuri:*

   Niram, Manam, Eadai, Nurai, Enjal

3. *Neikuri :*

A case sheet format was prepared on the basis of the Siddha methodology example envagai thervvugal, mukkutram, nilam, kaalam, udal thathugal, including neerkuri and neikuri. Individual case sheet was maintained for each patient at outpatient department.

Trial Drug:

Drug: KANTHAGAPARPAM :

Reference : Anupoga vaithiya navaneetham part- 6

Ingredients:

1. Kanthagam (sulphur)
2. Marutham pattai (Terminalia arjuna)
3. citrus limon

Procedure:

- 35gm of kanthagam is taken and kept it in lemon juice for 60 nazhigai(24 hr) and dried, and maruthambattai ash (84gm) is taken .
- The pudam is done by 100 palam dried varati

Dosage:

200 mg b.i.d after food

Adjuvant:

Honey

Duration:

20 days

Indication:

80 types of vatha disease

KANTHAGA

Results & Observations

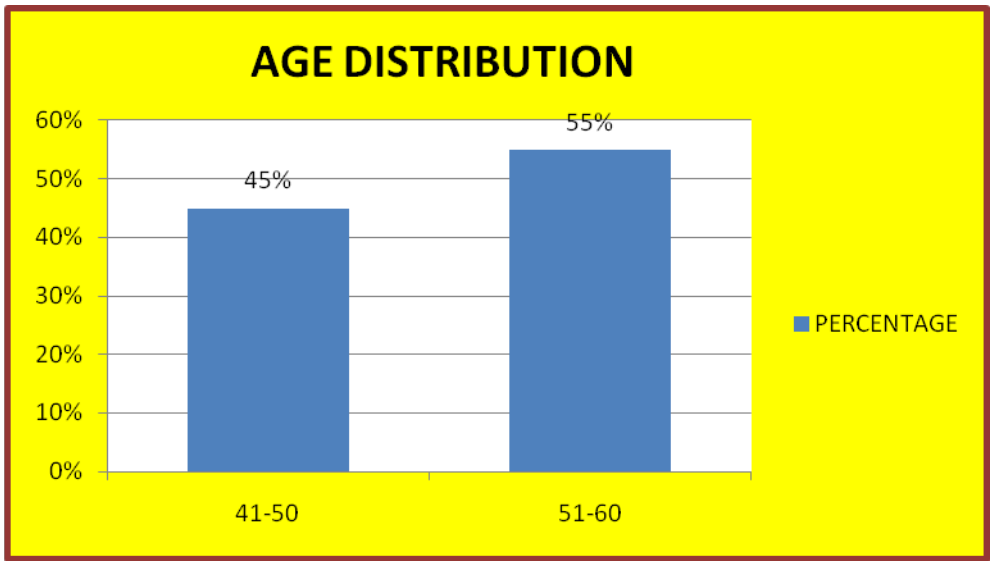
RESULTS AND OBSERVATIONS:

The factors considered for the purpose of the study comprised of the following:

- Age Distribution
- Thinai
- Paruva kaalam
- Occupational status
- Socio economic Status
- Food habits
- Personal habits
- Symptoms
- Classifications of results according to Vali, Azhal & Iyyam
- Udal kattugal
- Enn vagai thervu
- Naadi
- Classification on the basis of Neikkuri
- Clinical progress
- Results after treatment.

Age Distribution:-

Sl.NO	Age	No.of patients/40	Percentage
1.	41-50	18	45%
2.	51-60	22	55%

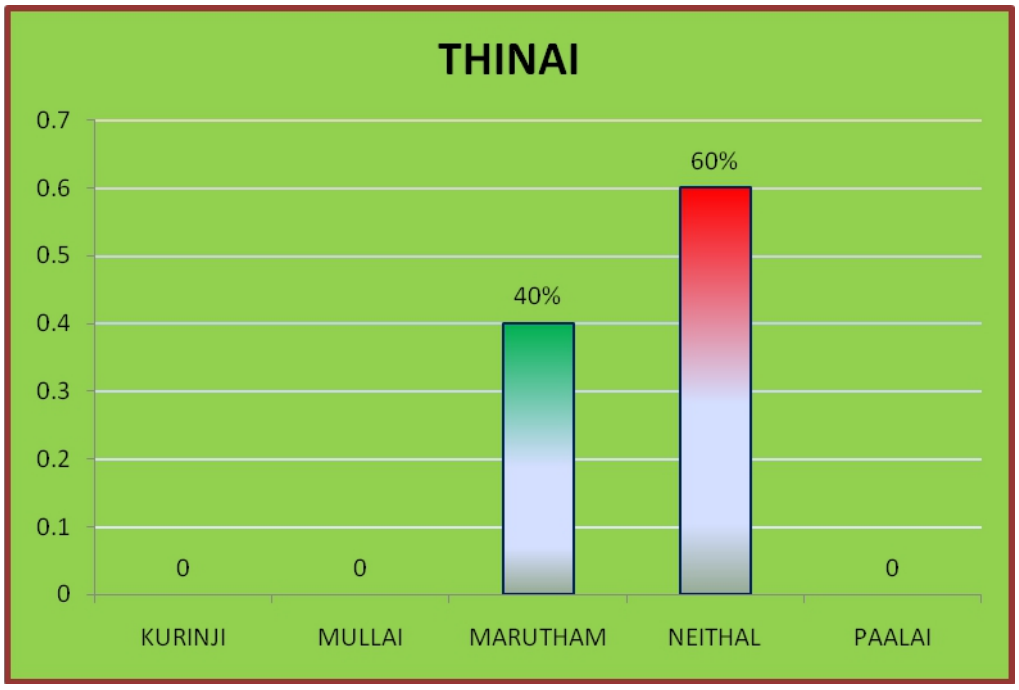


Inference:

According to the above mentioned data 45% of patients were in age groups 41-50 years, 55% of patients were in age group 51-60 years.

Thinai:

Sl.No	Thinai	No.of patients/40	Percentage
1	Kurinji	0	0%
2	Mullai	0	0%
3	Marutham	16	40%
4	Neithal	24	60%
5	Paalai	0	0%

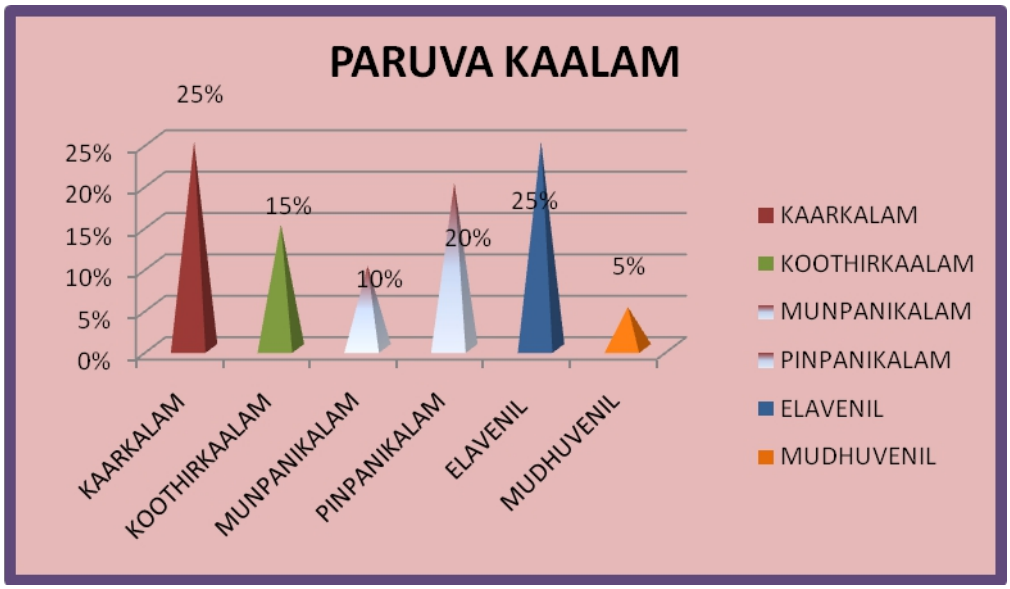


Inference

From the above data 60% of patient from neithal, 40% of cases from marutham.

Paruva kaalam :

Sl.No	Paruva Kaalam	Months	No.of patients/40	Percentage
1	**Kaar kalam**	Avani, Puratasi, Mid Aug-Mid Oct	**10**	**25%**
2	**Koothir kalam**	Iyppasi, Kaarthigai Mid Oct-Mid Dec	**6**	**15%**
3	**Munpani kalam**	Margazhi, Thai Mid Dec-Mid Feb	**4**	**10%**
4	**Pinpani kalam**	Maasi, Panguni Mid Feb-Mid April	**8**	**20%**
5	**Elavenil kalam**	Chithirai, vaigasi Mid April- Mid June	**10**	**25%**
6	**Mudhuvenilkaalam**	Aani, Aadi Mid June-Mid Aug	**2**	**5%**

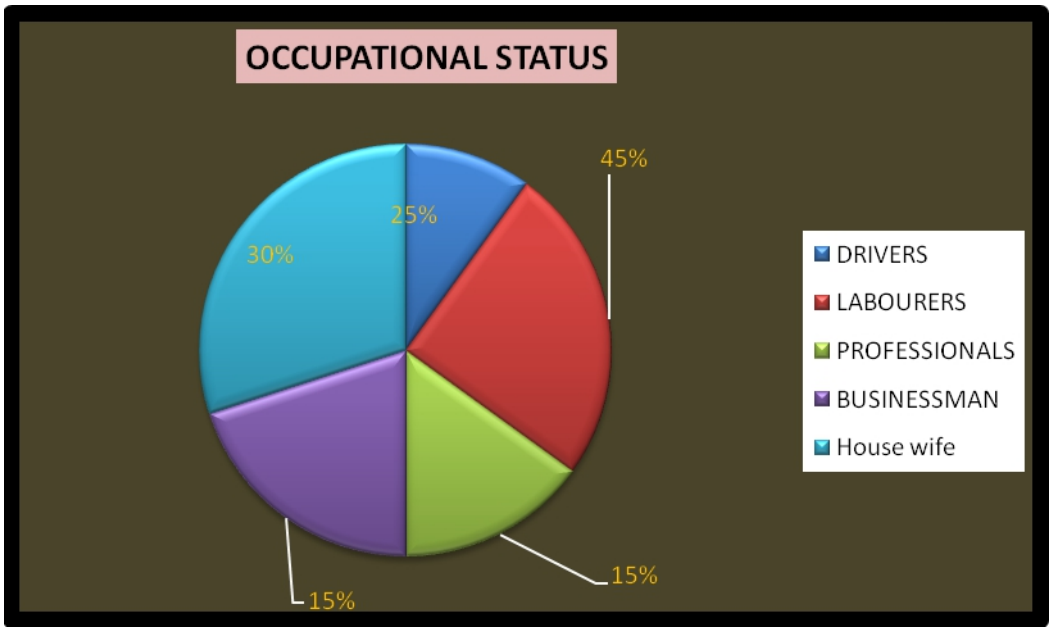


Inference :

25% of case came in kaar kalam , 15% of case came in koothirkaalam , 10% of case came in munpanikalam , 20% of case came in pinpanikalam , 25% of case came in elavenil , and 5% of case in mudhuvenil kalam

Occupational Status:

Sl.No	Occupational status	No.of patients/40	Percentage
` 1	Drivers	4	10%
2	Labourers	10	25%
3	Professionals	6	15%
4	Businessman	8	20%
5	House wife	12	30%



Inference

10% of cases were drivers.

25% of cases were labourers.

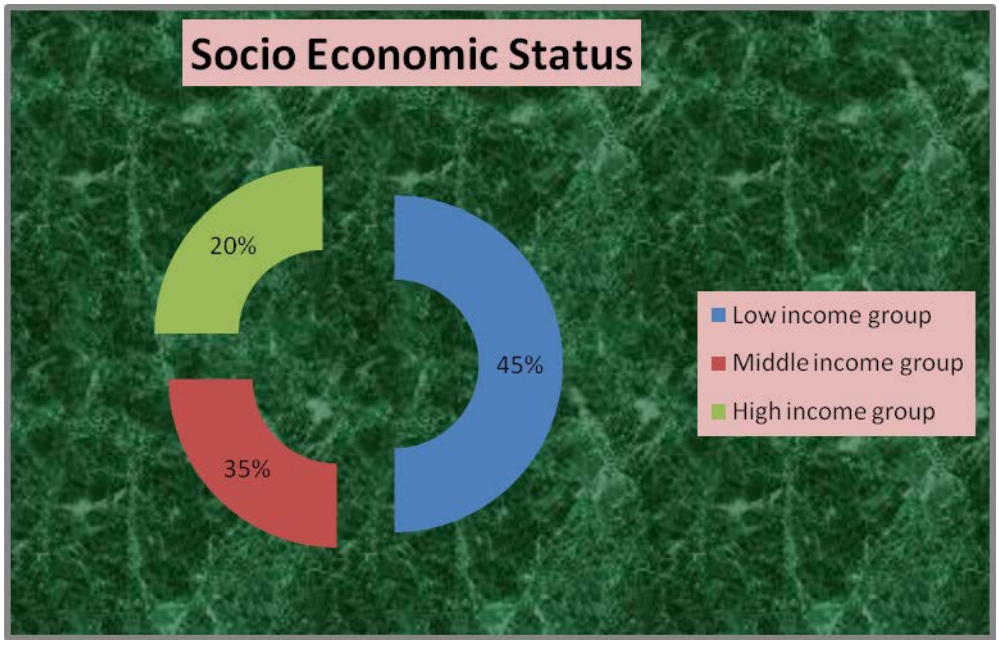
15% of cases were Business Man

20% of cases were professional

30% of cases were house wife

Socio Economic Status:

Sl.No	Socio Economic Status	No.of patients/40	Percentage
1	Low income group (below 10000/month)	18	45%
2	Middle income group (10000 to 20000/month)	14	35%
3	High income group (above 20000/month)	8	20%

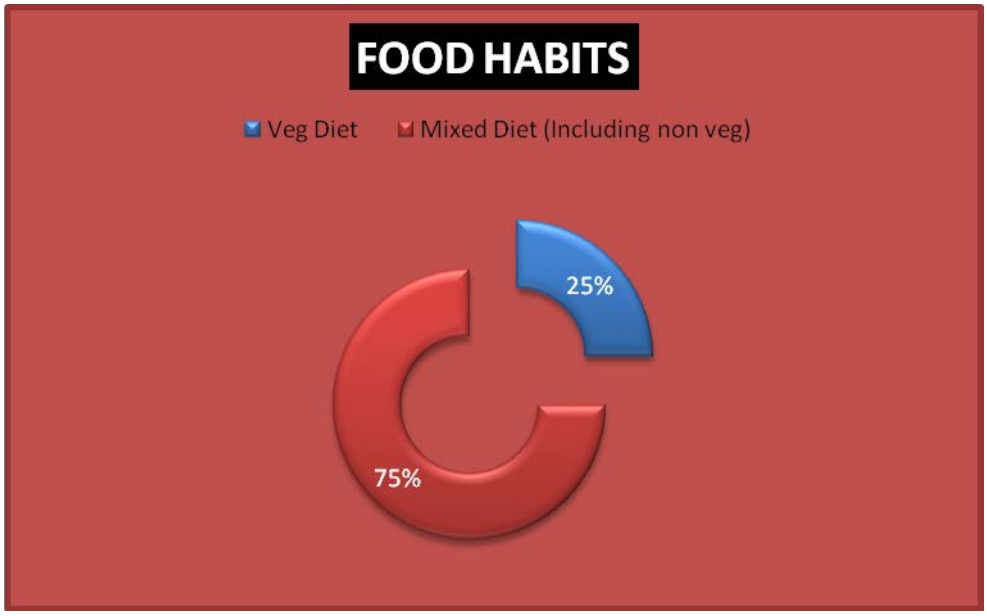


Inference

45% of cases belong to Low income group and 35% of patients belong to middle income group. 20% of cases belong to high income group.

Food Habits:

Sl.No	Food Habit	No.of patients/40	Percentage
1.	Vegetarian Diet	10	25%
2.	Mixed Diet (including non veg)	30	75%



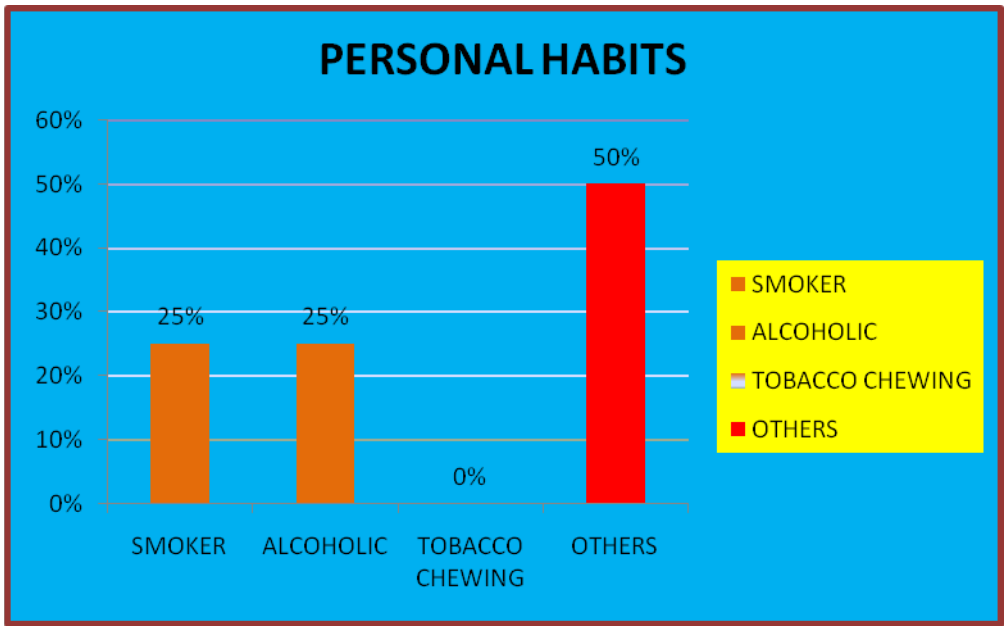
Inference

75% of cases were mixed diet(Including non veg).

25% of cases were Vegetarian.

Personal Habits:

Sl.No	Personal Habits	No.of patients/40	Percentage
1	Smoker	10	25%
2	Alcoholic	10	25%
3	Tobacco chewing	0	0%
4	Others	20	50%

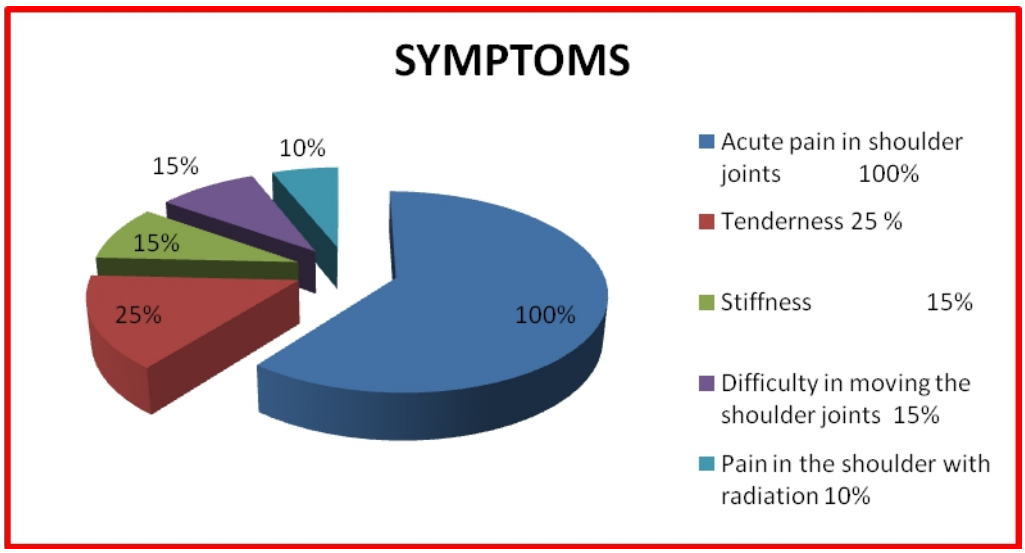


Inference

50% of patients had others, 25% of cases were smoker and 25% of cases were alcoholic.

Symptoms:

Sl.No	Symptoms	No.of patients/40	Percentage
1	Acute pain in Shoulder Joints	**40**	**100%**
2	Tenderness,	**10**	**25%**
3	Stiffness	**6**	**15%**
4	Difficulty in moving the shoulder joints	**6**	**15%**
5	pain in the shoulder with radiation	**4**	**10%**

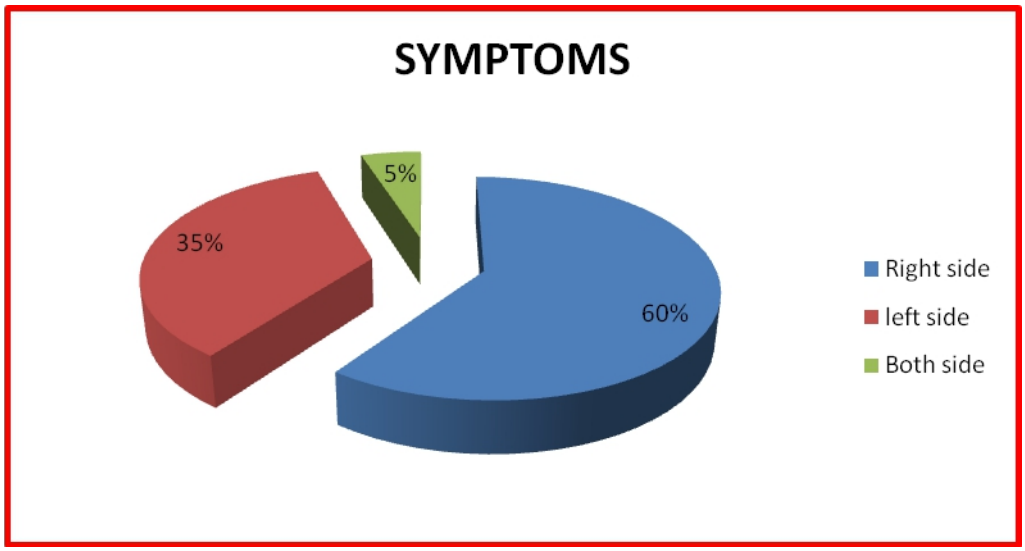


Inference

100% of cases came with complaints of acute pain in the shoulder joints, and 25% of cases with tenderness, 15% of cases with stiffness and 15% of cases with difficulty in moving the shoulder joints , 10% of cases with pain in the shoulder with radiation

Symptoms:

Sl.No	Sides of the joint affected	No.of patients/40	Percentage
1	Right side	24	60%
2	Left side	14	30%
3	Both	2	5%

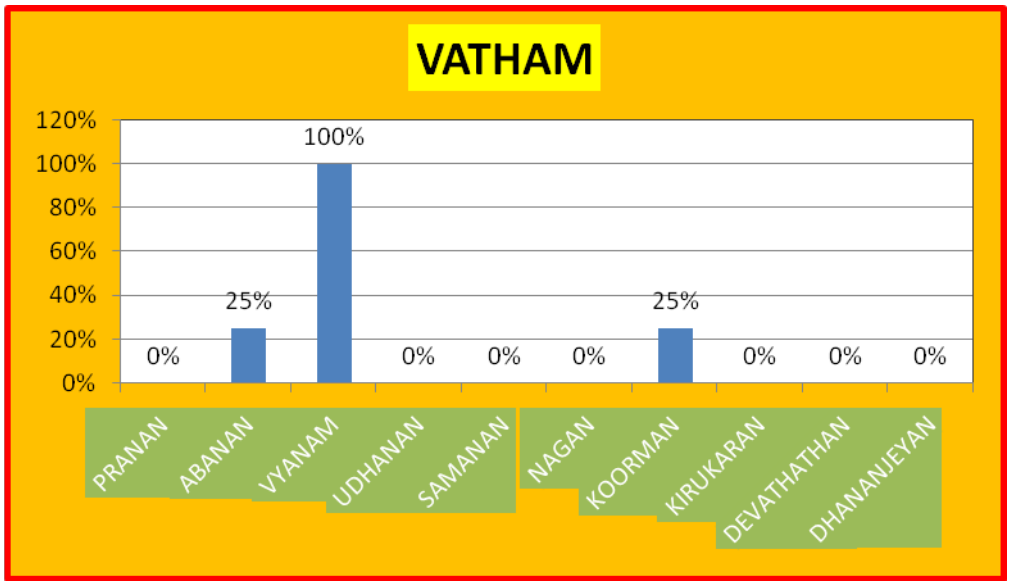


Inference

60% of cases came with complaints of acute pain in Rt side shoulder joint , 30% of cases with complaints of acute pain in left side shoulder joint and 5% of cases with pain in the shoulder of both the sides.

Vatham:

Sl.No	Vatham	No.of patients/40	Percentage
1	Pranan	0	0%
2	Abanan	10	25%
3	Vyanan	40	100%
4	Udhanan	0	0%
5	Samanan	0	0%
6	Nagan	0	0%
7	Koorman	10	25%
8	Kirukaran	0	0%
9	Devathathan	0	0%
10	Dhananjeyan	0	0%

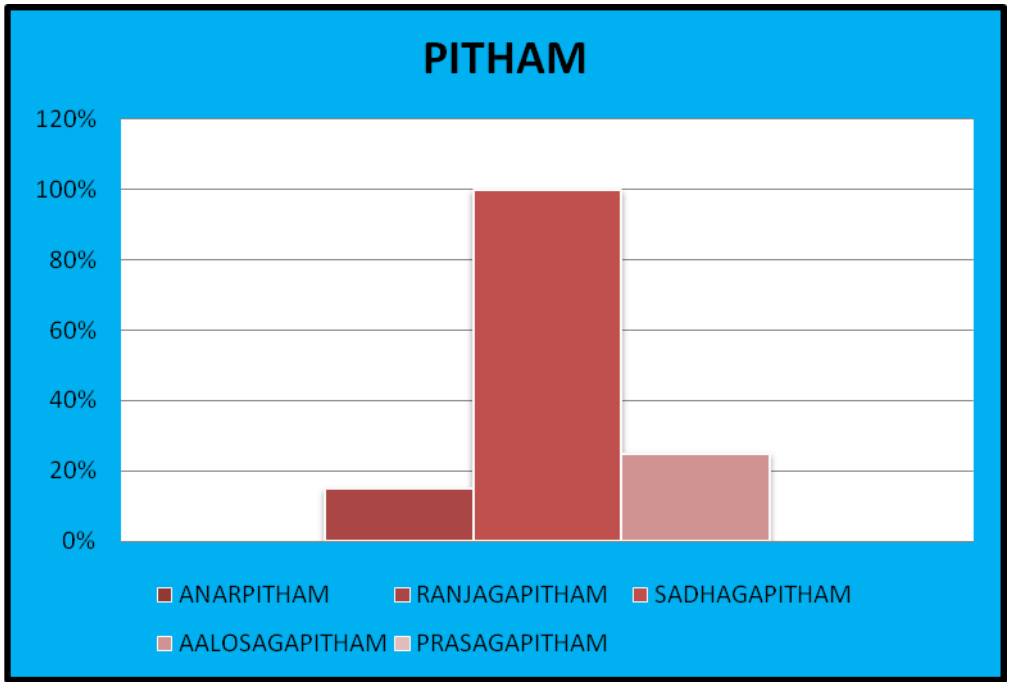


Inference

Abaanan was affected in 25% of patients and Vyanan was affected in 100% of patients, koorman was affected 25% of patients.

Pitham:

Sl.No	Pitham	No.of patients/40	Percentage
1	Anar Pitham	0	0%
2	Ranjaga Pitham	6	15%
3	Sadhaga Pitham	40	100%
4	Aalosaga Pitham	10	25%
5	Prasaga Pitham	0	0%

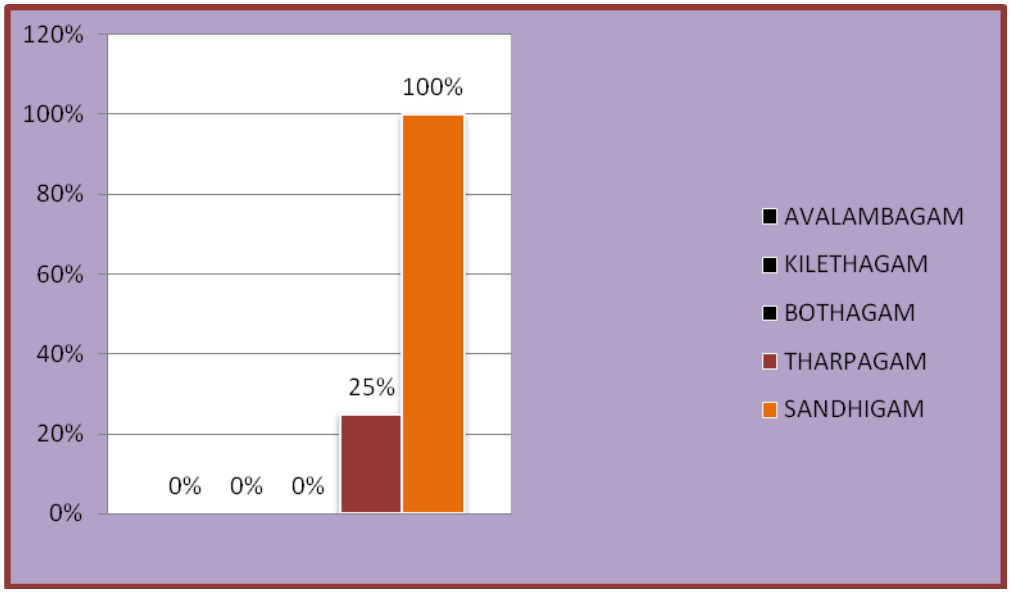


Inference

Saathagam was affected in 100% of patients, aalosagam was affected in 25% and ranjagapitham was affected in 15

IYYAM:

Sl.No	Iyyam	No.of patients/40	Percentage
1	Avalambagam	0	0%
2	Kilethagam	0	0%
3	Bothagam	0	0%
4	Tharpagam	10	25%
5	Sandhigam	40	100%

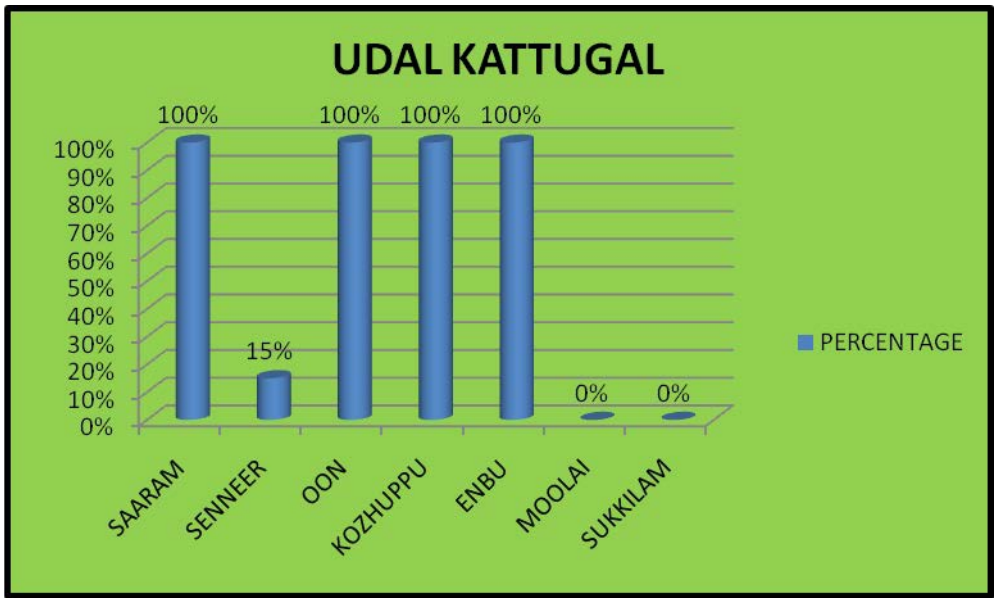


Inference

Tharpagam was affected in 25% of patients and Santhigam in 100% of patients.

Udal Kattugal:

Sl.No	Udal Kattugal	No.of patients/40	Percentage
1	Saaram	100	100%
2	Senner	6	15%
3	Oon	40	100%
4	Kozhuppu	40	100%
5	Enbu	40	100%
6	Moolai	0	0%
7	Sukkilam	0	0%

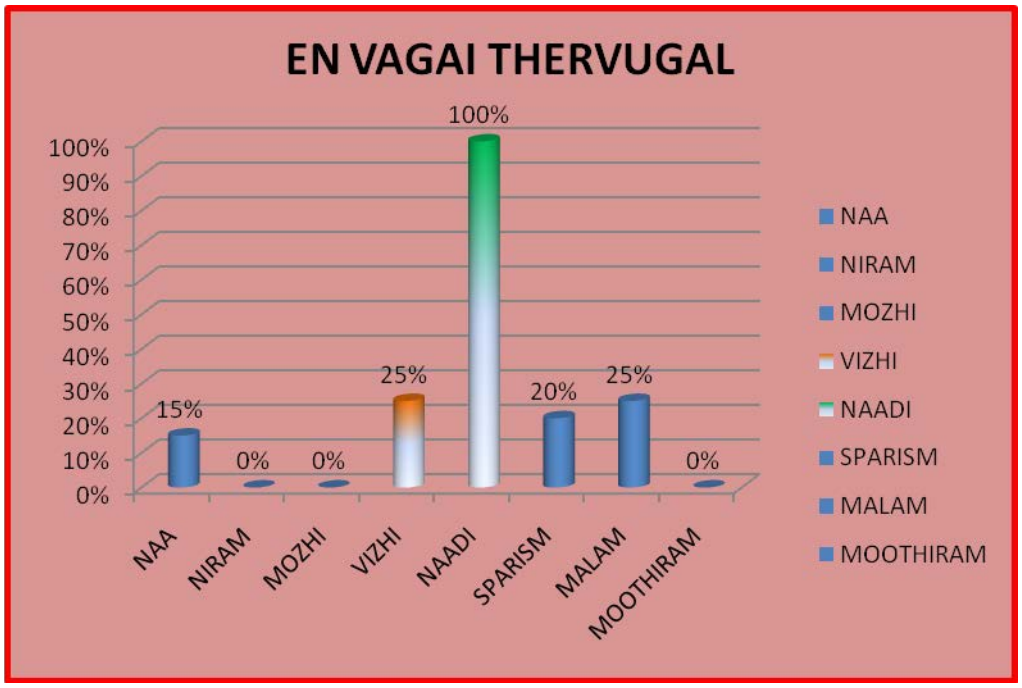


Inference

Saaram was affected in 100% of patients , senner was affectrd in 15% , Enbu was affected in 100% of patients , Oon affected in 100% ,kozhuppu was affected in 100%.

Enn Vagai Thervu:

Sl.No	Enn Vagai Thervu	No.of patients/40	Percentage
1	Naa	6	15%
2	Niram	0	0%
3	Mozhi	0	0%
4	Vizhi	10	25%
5	Naadi	40	100%
6	Sparism	8	20%
7	Malam	10	25%
8	Moothiram	0	0%

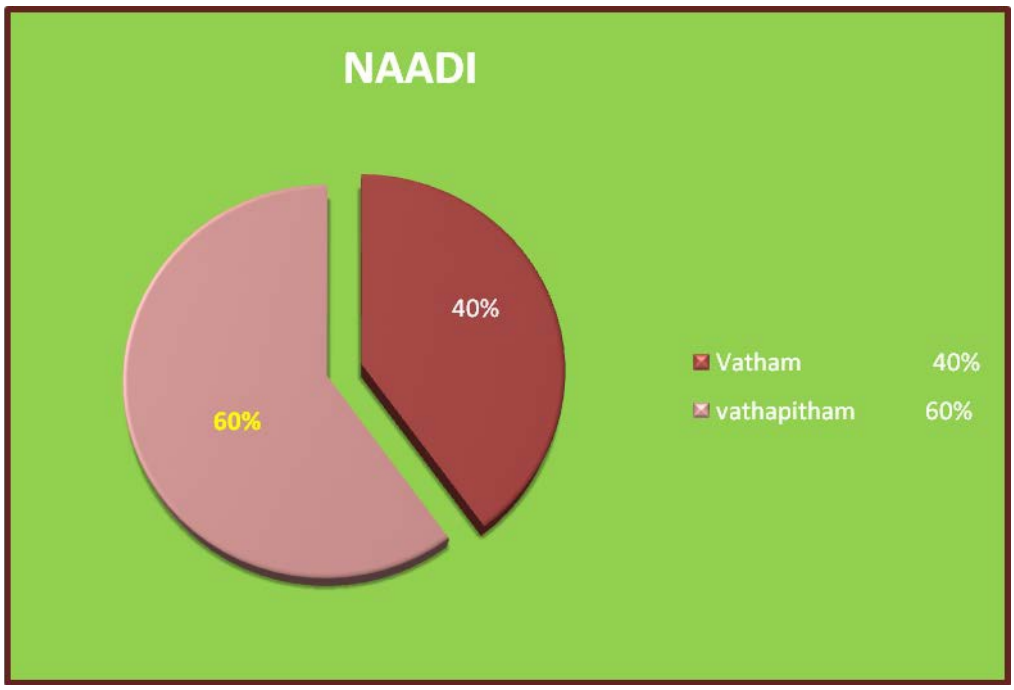


Inference

Naadi was affected in 100% of patients, malam was affected 25% , vizhi was affected 25% , sparism was affected in 20% , and 15% of patients naa was affected .

Naadi:

Sl.No	Naadi	No.of patients/40	Percentage
1	Vatham	16	40%
2	Vathapitham	24	60%

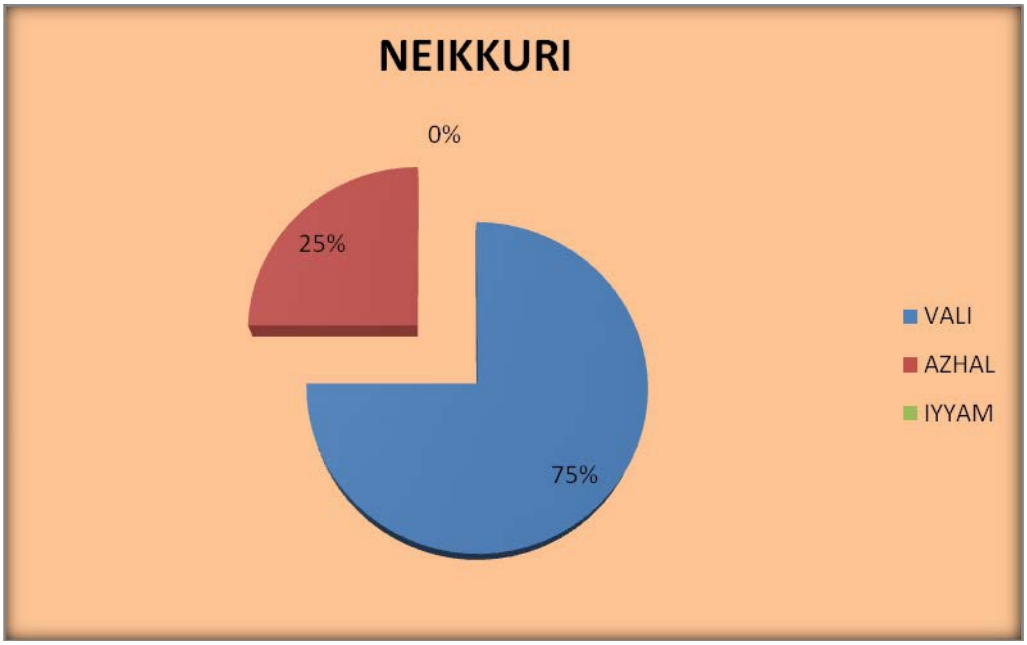


Inference

In 40% of cases vatha naadi was felt , and 60% of patient's vatha pitham naadi was felt.

Neikkuri:

Sl.No	Neikkuri	No.of patients/40	Percentage
1	Vali (spreads like snake)	30	75%
2	Azhal (spreads like ring)	10	25%
3	Iyyam (stands like pearl)	0	0%

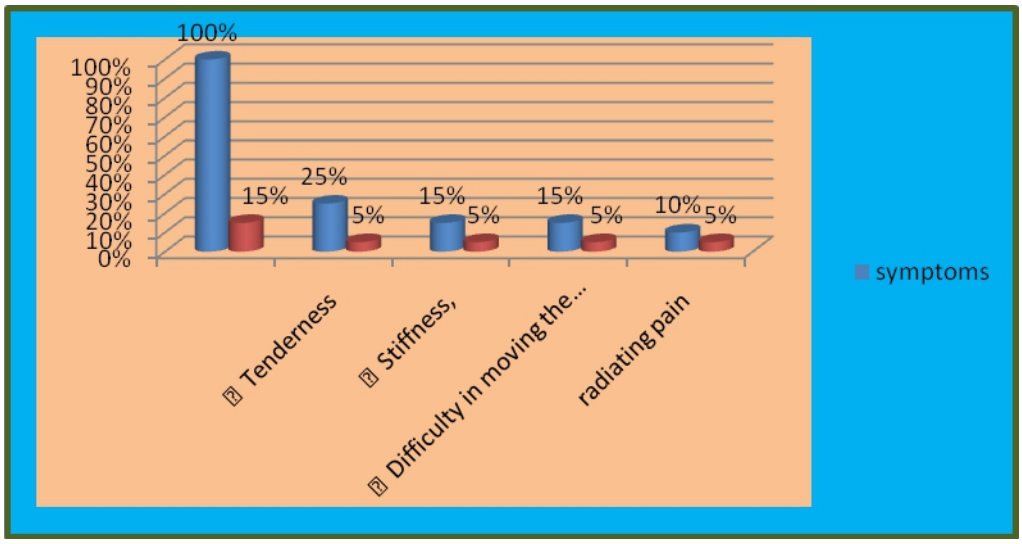


Inference:

70% of cases show vali neikuri and 25% shows azhal neikkuri.

Clinical Progress:

Sl.No	Symptoms	No.of patients/40		Percentage	
		BT	AT	BT	AT
1	Acute pain in Shoulder Joints	40	6	100%	15%
2	Tenderness,	10	2	25%	5%
3	Stiffness,	6	2	15%	5%
4	Difficult in moving the shoulder joint.	6	2	15%	5%
5	Radiating pain	4	2	1 0%	5%

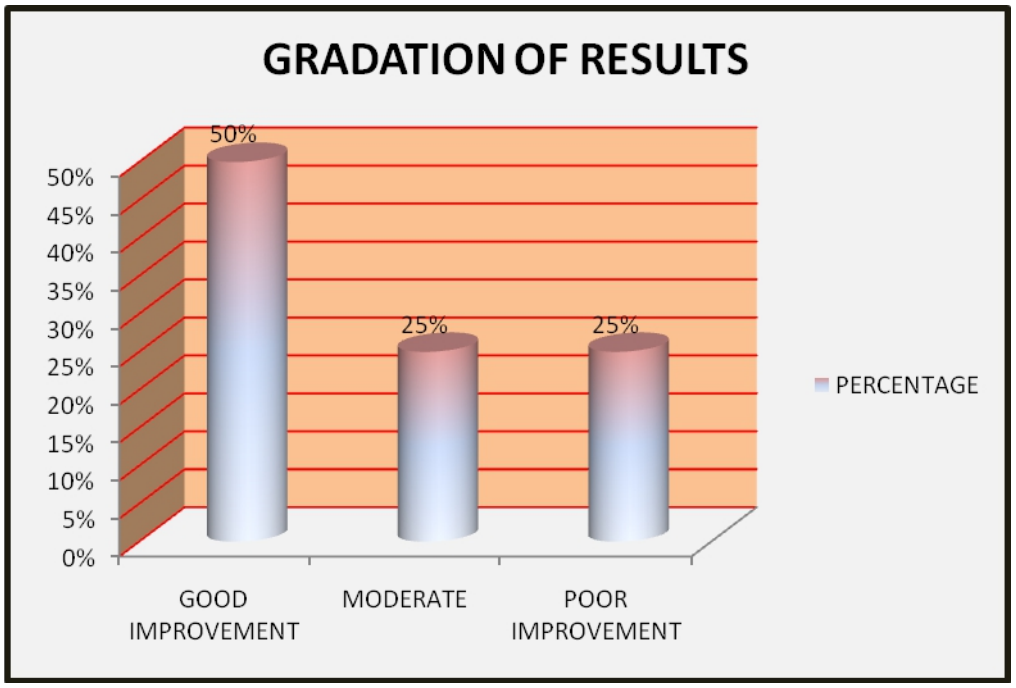


Inference

Before treatment 100% of cases Acute pain in Shoulder Joints, after treatment 15% and before treatment 25% of cases Tenderness, after treatment 5% , before treatment 15% of cases stiffness after treatment 5% and before treatment 15% of cases difficulty in moving the shoulder joints after treatment 5% , before treatment 10% radiating pain after treatment 5%.

Gradation of results*:*

Sl.No	Gradation of results	No.of patients/40	Percentage
1	Good Improvement	20	50%
2	Moderate Improvement	10	25%
3	Poor Improvement	10	25%



Inference ;

50% of Patients show good improvement, 25% of shows moderate improvement and 25% of cases shows poor improvement.

LABORATORY INVESTIGATION REPORT (OP)

SL. NO.	OP. NO.	NAME	AGE/SEX	HEAMOTOLOGICAL REPORT														URINE ANALYSIS						STOOL EXAMINATION			
				BEFORE TREATMENT				AFTER TREATMENT				ESR(mm)				HB(Gm)		BT			AT			BT		AT	
				TC (Cu/mm)	DC			TC (Cu/mm)	DC			BT		AT		BT	AT										
					P	L	E		P	L	E	½ Hr	1 Hr	½ Hr	1 Hr			Alb	Sug	Dep	Alb	Sug	Dep	Ova	Cyst	Ova	Cyst
1	174	Abdulkani	60/M	9700	59	37	4	9800	60	36	3	3	7	3	6	12	13.2	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2	601	Arunagiri	52/M	9600	57	38	5	9600	60	37	4	3	5	3	8	12.8	13	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
3	3346	selvaraj	48/M	9400	56	34	6	9200	55	32	5	2	5	4	8	13.5	12.8	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
4	2559	gunasekaran	47/M	8700	54	42	4	9000	58	38	3	10	22	9	18	12.4	12.5	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
5	915	Ramasamy	50/M	10600	62	34	4	9800	57	30	4	7	17	8	16	12	13.1	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	891	Mahalaksmi	47/F	9800	56	39	5	9600	60	35	6	13	24	10	18	13	13.5	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
7	4727	Karpakam	59/F	9700	58	37	3	9700	55	35	3	10	18	15	20	12.5	12.1	Nil	Nil	FPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
8	7063	Mani	51/M	10700	66	30	4	10800	65	30	5	2	3	4	6	13	14.2	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
9	6391	Nagammal	52/F	9300	53	38	9	9400	55	35	6	14	20	9	16	13.8	13.7	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
10	4835	Subramani	55/M	9600	57	39	6	9500	56	35	4	6	14	3	9	14.8	15	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
11	4621	Anjalidevi	47/F	9700	57	38	5	9300	61	36	6	5	8	5	10	13.6	13.7	Nil	Nil	FPC	Nil	Nil	FPC	Nil	Nil	Nil	Nil
12	6850	Premkumar	60/M	10400	60	38	4	9900	58	40	5	15	25	8	18	14	13.5	Nil	Nil	FPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
13	312	Krishnamoorthy	60/M	9300	58	37	3	9600	60	36	3	11	23	10	15	12.4	13	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	4546	Kumar	57/M	9600	66	31	7	10500	60	34	8	15	30	12	18	15	14.5	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
15	2967	Natrajan	57/M	9800	55	42	3	9750	58	40	4	5	22	4	10	12.2	11.5	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
16	9781	Kumari	53/F	9400	56	33	2	9350	55	37	2	5	10	8	16	12.4	12.5	Nil	Nil	OEC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
17	7895	Venkatesan	49/M	9000	55	39	3	9100	56	40	2	7	15	4	8	12	12.8	Nil	Nil	OEC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
18	4508	Bahavathipillai	54/M	9300	59	37	4	9450	60	35	3	4	8	3	7	14.8	14.5	Nil	Nil	OEC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
19	4795	Chelladurai	46/M	9400	57	33	7	9600	60	35	3	3	7	3	6	14.4	14.3	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
20	7445	Lakshmi	48/F	9200	56	35	6	9300	57	34	5	12	20	7	16	13.5	14	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

TC – Total Count

Dc – Differential Count

P – Polymorph

L – Lymphocyte

E – Eosinophil

Hb – Haemoglobin

ESR – Erythrocyte Sedimentation Rate

Alb – Albumin

Sug – Sugar

Dep – Deposits

OEC – Occasional Epithelial Cells

OPC – Occasional Pus Cells

FPC – Few Pus Cells

FEC – Few Epithelial Cells

LABORATORY INVESTIGATION REPORT (IP)

SL. NO.	OP. NO.	NAME	AGE	HEAMOTOLOGICAL REPORT														URINE ANALYSIS						STOOL EXAMINATION			
				BEFORE TREATMENT				AFTER TREATMENT				ESR(mm)				HB(Gm)		BT			AT			BT		AT	
				TC (Cu/mm)	DC			TC (Cu/mm)	DC			BT		AT		BT	AT										
					P	L	E		P	L	E	½ Hr	1 Hr	½ Hr	1 Hr			Alb	Sug	Dep	Alb	Sug	Dep	Ova	Cyst	Ova	Cyst
1	244/1605	Selvaraj	52/M	9600	45	32	3	9700	52	36	3	2	5	3	6	14.1	14.2	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2	260/2141	Vallayammal	45/F	9500	56	38	5	9600	59	37	4	3	5	3	7	12.8	13	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
3	95/8383	Anandhan	60/M	9400	58	34	6	9300	56	32	3	2	5	4	9	13	12.8	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
4	368/4493	Murugan	47/M	9400	58	39	3	9100	60	38	2	10	22	9	18	12.4	12.6	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
5	530/4159	Mahalakshmi	57/F	10600	60	34	4	10450	57	30	4	7	17	8	18	14	14.1	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	664/2789	Vennila	46/F	9400	56	39	5	9600	60	35	6	12	24	10	15	13	13.5	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
7	674/3076	Srinivasan	46/M	9700	58	37	2	9700	55	35	3	10	18	15	20	12.5	12.1	Nil	Nil	FPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
8	897/9214	Mani	60/M	10700	66	30	4	10800	65	30	5	2	3	4	6	14	14.2	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
9	921/9856	Rani	50/F	9300	57	38	3	9400	55	35	6	10	20	9	18	13.8	13.7	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
10	250/7524	Thulasi	45/F	9000	58	38	4	9200	53	35	4	2	4	3	6	14.8	14	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
11	267/7916	Yasodha	51/F	9000	60	32	8	8800	62	30	6	6	12	5	10	12.6	12.5	Nil	Nil	FPC	Nil	Nil	FPC	Nil	Nil	Nil	Nil
12	286/8306	Rakkaiyi	49/F	9700	54	42	4	9600	58	40	5	10	22	8	19	14	13.5	Nil	Nil	FPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
13	528/3082	Julli	60/F	10100	59	37	3	10300	60	36	3	15	25	10	13	13.2	13	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	534/3195	Thangamani	50/M	10700	62	31	7	10500	60	34	8	15	30	12	18	15	14.5	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
15	589/4272	Saroja	45/F	9800	55	42	3	9750	58	40	2	5	22	4	10	12.2	12.5	Nil	Nil	OPC	Nil	Nil	OPC	Nil	Nil	Nil	Nil
16	623/4995	Lakshmi	52/F	9300	56	38	6	9350	55	41	4	5	10	8	16	12.4	12.5	Nil	Nil	OEC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
17	655/1367	Leenamery	56/F	9400	58	39	3	9450	56	40	2	3	5	4	8	12	12.2	Nil	Nil	OEC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
18	849/3961	Durai	45/M	9600	59	37	4	9550	60	35	3	7	12	10	14	13	12.5	Nil	Nil	OEC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
19	1309/3961	Kamachi	60/M	9600	58	36	6	9600	60	35	3	7	13	6	14	12.4	13	Nil	Nil	OPC	Nil	Nil	Nil	Nil	Nil	Nil	Nil
20	371/1502	Subramani	52/m	9000	59	35	6	9100	58	34	4	6	10	5	8	14.6	14	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

TC – Total Count
Dc – Differential Count
P – Polymorph
L – Lymphocyte
E – Eosinophil

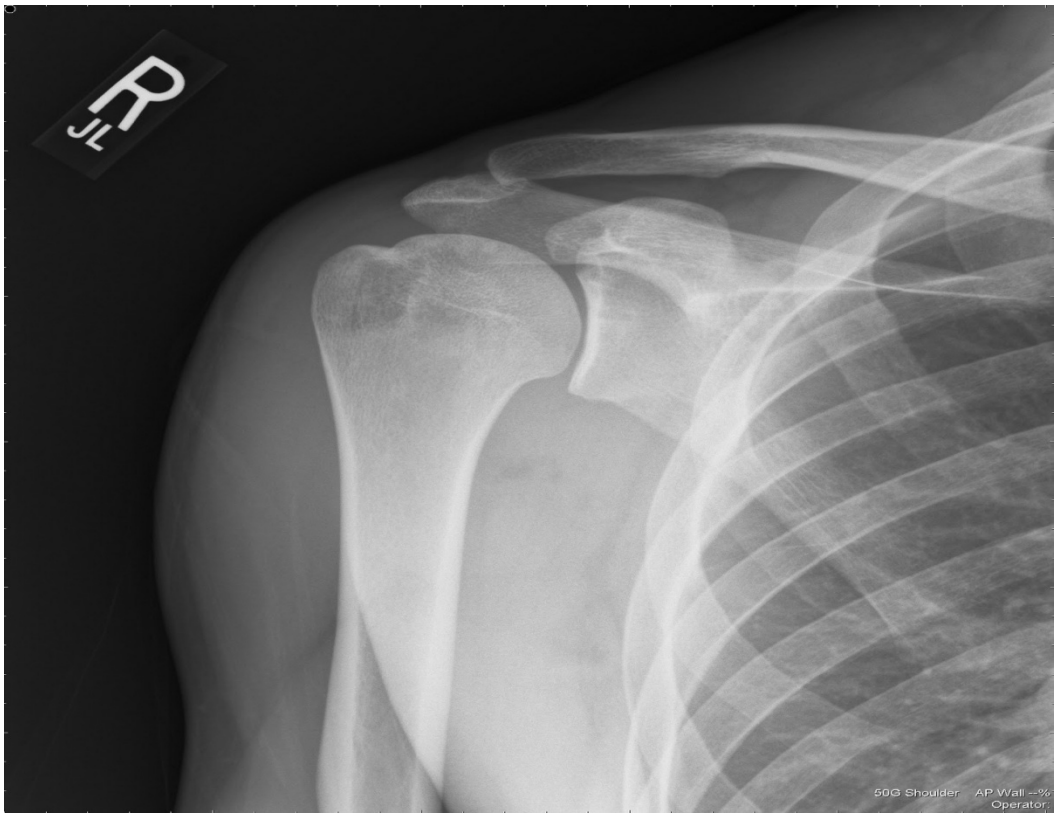
Hb – Haemoglobin
ESR – Erythrocyte Sedimentation Rate
Alb – Albumin
Sug – Sugar
Dep – Deposits

OEC – Occasional Epithelial Cells
OPC – Occasional Pus Cells
FPC – Few Pus Cells
FEC – Few Epithelial Cells

X-Ray Finding

SL. NO.	OP. NO/ IP NO.	NAME	AGE/SEX	X-RAY INVESTIGATION
1	174	Abdulkani	60/M	Osteophytic changes +
2	601	Arunagiri	52/M	Normal
3	3346	Selvaraj	48/M	Normal
4	2559	Gunasekaran	47/M	Normal
5	915	Ramasamy	50/M	Normal
6	891	Mahalaksmi	47/F	Normal
7	4727	Karpakam	59/F	Osteophytic changes +
8	7063	Mani	51/M	Normal
9	6391	Nagammal	52/F	Normal
10	4835	Subramani	55/M	Normal
11	4621	Anjalidevi	47/F	Normal
12	6850	Premkumar	60/M	Osteophytic changes +
13	312	Krishnamoorthy	60/M	Osteophytic changes +
14	4546	Kumar	57/M	Normal
15	2967	Natrajan	57/M	Normal
16	9781	Kumari	53/F	Normal
17	7895	Venkatesan	49/M	Normal
18	4508	Bahavathipillai	54/M	Normal
19	4795	Chelladurai	46/M	Normal
20	7445	Lakshmi	48/F	Normal
21	244/1605	Selvaraj	52/M	Normal
22	260/2141	Vallayammal	45/F	Normal
23	95/8383	Anandhan	60/M	Osteophytic changes +
24	368/4493	Murugan	47/M	Normal
25	530/4159	Mahalakshmi	57/F	Osteophytic changes +
26	664/2789	Vennila	46/F	Normal
27	674/3076	Srinivasan	46/M	Normal
28	897/9214	Mani	60/M	Osteophytic changes +
29	921/9856	Rani	50/F	Normal
30	250/7524	Thulasi	45/F	Normal
31	267/7916	Yasodha	51/F	Normal
32	286/8306	Rakkaiyi	49/F	Normal
33	528/3082	Julli	60/F	Osteophytic changes +
34	534/3195	Thangamani	50/M	Normal
35	589/4272	Saroja	45/F	Normal
36	623/4995	Lakshmi	52/F	Normal
37	655/1367	Leenamery	56/F	Normal
38	849/3961	Durai	45/M	Normal
39	1309/3961	Kamachi	60/M	Osteophytic changes +
40	371/1502	Subramani	52/m	Normal

NORMAL X-RAY RIGHT SHOULDER JOINT AP VIEW



NORMAL X-RAY LEFT SHOULDER JOINT AP VIEW

Discussion

DISCUSSION

Periarthritis of the shoulder joints is a chronic, retrograde and inflammatory disease of the shoulder joint, capsule and the soft tissues surrounding it. This pathology is mostly due to exposure to cold, trauma, or chronic strain of the shoulder. The main clinical manifestations are soreness and dysfunction of the shoulder. The disease is usually found in patients above the age of 50.

In my study 40 patients were treated in outpatient and inpatient department of Post graduate pothumaruthuvam, Govt Siddha Medical College Hospital, Chennai – 106.

All patients were subjected to preliminary investigations which include haematological, urine examination. Before Treatment purgative was given to all patients to balance the altered three doses.

The Trial Medicine kanthagaparpam was administered from the next day onwards, course of Treatment is 20 days.

Age Distribution:

According to the above mentioned data 45% of patients were in age groups 41-50 years, 55% of patients were in age group 51-60 years.

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Distribution of Thinai:

From the above data 60% of patient from neithal, 40% of cases from marutham.

Paruvakalam:

According to the above mentioned data .25% of case came in kaar kalam , 15% of case came in koothirkaalam , 10% of case came in munpanikalam , 20% of case came in pinpanikalam , 25% of case came in elavenil , and 5% of case in mudhuvenil kalam.

Occupational Status:

In my study 10% of cases were drivers.

25% of cases were labourers.

15% of cases were Business Man

20% of cases were professional

30% of cases were house wife.

Socio Economic Status:

According to this study , 45% of cases belong to Low income group and 35% of patients belong to middle income group. 20% of cases belong to high income group.

Food Habits:

According to this study , 75% of cases were mixed diet(Including non veg), 25% of cases were Vegetarian.

Personal Habits:

In my study 50% of patients had other habits, 25% of cases were smoker and 25% of cases were alcoholic.

Symptoms:

According to this study 100% of cases came with complaints of acute pain in the shoulder joints, and 25% of cases with tenderness, 15% of cases with stiffness and 15% of cases with difficulty in moving the shoulder joints , 10% of cases with pain in the shoulder with radiation.

Sides of the joints affected

60% of cases came with complaints of acute pain in Rt side shoulder joint , 30% of cases with complaints of acute pain in left side shoulder joint and 5% of cases with pain in the shoulder of both the sides.

Vali :

Abaanan was affected in 25% of patients and Vyanan was affected in 100% of patients, koorman was affected 25% of patients.

Azhal:

Saathagam was affected in 100% of patients, aalosagam was affected in 25% and ranjagapitham was affected in 15% .

Iyyam:

Tharpagam was affected in 25% of patients and Santhigam in 100% of patients.

Udhal Kattugal:

Saaram was affected in 100% of patients , senner was affectrd in 15% , Enbu was affected in 100% of patients , Oon affected in 100% ,kozhuppu was affected in 100%.

Envagai Thervu:

Naadi was affected in 100% of patients, malam was affected 25% , vizhi was affected 25% , sparism was affected in 20% , and 15% of patients naa was affected .

Naadi:

40% of patient's vatha naadi was felt and 60% of cases vatha pitha vatha naadi was felt..

Neikuri:

70% of cases show vali neikuri and 25% shows azhal neikkuri.

Clinical Progress:

Before treatment 100% of cases Acute pain in Shoulder Joints, after treatment 15% and before treatment 25% of cases Tenderness, after treatment 5% , before treatment 15% of cases stiffness after treatment 5% and before treatment 15% of cases difficulty in moving the shoulder joints after treatment 5% , before treatment 10% radiating pain after treatment 5%.

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Trial Medicine:

All the 40 patients treated with the Trial Medicine kanthaga parpam with honey for 20 days The disease and treatment are based primarily on the derangement of Mukkutram, which again is based on the Pancha bootham

theory. Incidence of Kumba vatham and treatment are also based on these primary principles of Siddha medicine.

The bootham araises vatham kuttram in the body and so as leads to degenerate and weakness of shoulder joints. Increased vatha kuttram is brought to normal mainly by kaippu suvai and thuvarppu suvai.

A. Vinn + vayu = Kaippu
B. Earth+ vayu = Thuvarppu. Thus they decrease the vatha kuttram. So i conclude the trial drugs controls the disease Kumba vatham and it comes under the **Ethirurai Maruthuvam**

Gradation of results:

50% of Patients show good improvement, 25% of shows moderate improvement and 25% of cases shows poor improvement.

Summary

SUMMARY

The aim of the study is to reduce the symptoms of Periarthritis. . The trial medicine Kanthaga parpam was prepared as per literature. The duration of the trial period is 20 days. The trial dose is Kanthaga parpam 200mg ,twice a day with honey. I had selected 40 patients for the trial based on Inclusion and Exclusion criteria. Before treatment routine blood, urine analysis taken in all 40 patients. Siddha methods like udal thathukkal, Envagai thervu, Neerkuri and Neikuri were noted in case sheet proforma. Patients were instructed to come for next review once in 7 days. The entire details of the patients were noted in the case sheet proforma.

Age :

Most of the patients were in the age group between 51-60 years.

Thinai :

Most of the patients were from Neithal Thinai 60%.

Kalam :

Seasonal Variances do not have any impact for affecting the people.

Occupation:

The disease is more common in people working as Labourers & housewifes.

Diet & Personal habits:

People with habit of taking Vegetarian and Mixed Diet(Including non veg), smoking, Alcoholic have more incidence of the disease.

Mukkutram:

In Vali, abaanan, koorman and viyanan, in Azhal Sathagam & Aalosagam and in Iyyam Santhiagam were affected in most of the cases.

Udal Thathugal:

Saaram, Oon, Kozhuppu, Enbu were affected in all the patients.

Naadi :

Vathapitha naadi was most common naadi felt.

Results after treatment:

50% of patients show good improvement, 25% of patients shows moderate improvement and in 25% of patients poor improvement was observed.

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The pharmacological studies reveal that trial drugs had good Anti-arthritis effect in rats. The toxicity study revealed that there were no signs of toxicity as could be judged by the absence of undesirable clinical manifestations and no alteration in bio chemical markers.

The bio-statistical report of the clinical trial shows significant result.

Conclusion

CONCLUSION

- **KUMBAVATHAM** (Periarthritis) is primarly due to the derangement of vatham
- The trial medicine Kanthaga parpam predominating with kaippu taste respectively neutralizes the vatham .
- From the pre clinical pharmacological studies it is evident that the medicines were significant Anti-arthritis activity.
- The Kanthaga parpam do not produce any toxicity in preclinical study. So it is non toxic and safe drug for Kumba vatham.
- In Bio-chemical analysis the trial medicine contains zinc and calcium,magnesium . These are very essential for strengthening the joints.
- No contra indication was reported during the course of the treatment.
- The trial medicines gave maximam relief from the symptoms of Kumba vatham.
- The prepration of trial medicines is easy and economical.
- Therefore the author concluded that the trial medicine KANTHAGA PARPAM should be a very positive remedy for Kumba vatham(Periarthritis).

Annexures

Certificates

The Tamil Nadu Dr. M.G.R. Medical University

69, Anna Salai, Guindy, Chennai-600 032

This Certificate is awarded to Dr .....G. KRISHNAPRAKASH.....

for participating as a ~~Resource Person~~ / Delegate in the VI Workshop on

"Research Methodology & Biostatistics"

for AYUSH Post-Graduates & Researchers

organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University

from 12th September 2011 to 16th September 2011

Dr. MAYILVAHANAN NATARAJAN
M.S.Orth. M.Ch.Orth. (L'pool) Ph.D. D.Sc. F.R.C.S. D.Sc. (Hon)^3
VICE CHANCELLOR

Dr. SUDHA SESHAYYAN, M.S.
REGISTRAR (FAC)

Dr. N. KABILAN, M.D. (Siddha)
READER, DEPT. OF SIDDHA

VEL'S COLLEGE OF PHARMACY

Approved by the Government of Tamil Nadu
Affiliated to The Tamil Nadu Dr. MGR Medical University
Velan Nagar, P.V. Vaithiyalingam Road, Pallavaram, Chennai - 600 117
Phone : (91-44) 2266 2500 / 01 / 02 / 03 Fax : (91-44) 2266 2513
E-mail : velscollege@gmail.com Web site : www.velscollege.com

S.No	Title of The Project	Name of The Investigator	Approval status/Remarks	Project Reference
4.	Evaluation of ovulation inducing activity for infertility and toxicological studies for Uppu parpam.	Dr. N. Kavitha	According to the protocol 36 rats were proposed, but while scrutinizing for pooling the final data, only 30 rats were sanctioned.	XIII/VELS/PCOL/04/2000/CPCSEA/IAEC/11.08.2012
5.	Hepatoprotective activity of Charaparpam by CCL4 induced method in rats	Dr. S. Umera	Total number of animals proposed was 60 rats. But 60 mice were sanctioned because, it was advised to share the control and standard group results. Since the similar pattern of the study has been planned in the same department, hence these data will serve as common.	XIII/VELS/PCOL/05/2000/CPCSEA/IAEC/11.08.2012
6.	A study on Poovarampattai kudineer choornam for the treatment of Swethakuttam.	Dr. A. Chinnaswamy	Total number of animals proposed was 42 rats. But only 36 animals were sanctioned.	XIII/VELS/PCOL/06/2000/CPCSEA/IAEC/11.08.2012
7.	A study of Kanthaga parpam for the treatment of kumbavatham.	Dr. G. Krishnaprakash	Total number of animals proposed was 36 rats and sanctioned.	XIII/VELS/PCOL/07/2000/CPCSEA/IAEC/11.08.2012
8.	Hypolipidemic activity of Kadukkai chooranam.	Dr. F. Priya	Total number of animals proposed was 48 rats, and it was advised to minimize the number to 40 rats only.	XIII/VELS/PCOL/08/2000/CPCSEA/IAEC/11.08.2012

City Centre : No. 521/2, Anna Salai, (Opp. G.R. Complex), Nandanam, Chennai - 600 035.
Phone / Fax : (91-44) 2431 5541 / 2431 5542 E-mail : velsrinivasa@vsnl.net

Dr. J.ANBU, M.Pharm., Ph.D., D.M.L.T.,MBA.,
Professor & Head
Department of Pharmacology & Toxicology
School of Pharmaceutical Sciences
Vels University
Pallavaram, Chennai-600 117.

VEL'S COLLEGE OF PHARMACY

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Velan Nagar, P.V. Vaithiyalingam Road, Pallavaram, Chennai - 600 117
Phone : (91-44) 2266 2500 / 01 / 02 / 03 Fax : (91-44) 2266 2513
E-mail : velscollege@gmail.com Web site : www.velscollege.com

S.No	Title of The Project	Name of The Investigator	Approval status/Remarks	Project Reference
4.	Evaluation of ovulation inducing activity for infertility and toxicological studies for Uppu parpam.	Dr. N. Kavitha	According to the protocol 36 rats were proposed, but while scrutinizing for pooling the final data, only 30 rats were sanctioned.	XIII/VELS/PCOL/04/2000/CPCSEA/IAEC/11.08.2012
5.	Analgesic activity of Karungali Ver Kudineer in rodents	Dr. S. Umera	Total number of animals proposed was 60 rats and mice. But only 60 mice and 18rats were sanctioned because, it was advised to share the control and standard group results. Since the similar pattern of the study has been planned in the same department, hence these data will serve as common.	XIII/VELS/PCOL/05/2000/CPCSEA/IAEC/11.08.2012
6.	A study on Serankottai Thiravagam for the treatment of Diabetes.	Dr. A. Chinnaswamy	Total number of animals proposed was 42 rats. But only 36 animals were sanctioned.	XIII/VELS/PCOL/06/2000/CPCSEA/IAEC/11.08.2012
7.	A study of Kanthaga parpam for the treatment of Arthritis (Kumbavatham).	Dr. G. Krishnaprakash	Total number of animals proposed was 36 rats and sanctioned.	XIII/VELS/PCOL/07/2000/CPCSEA/IAEC/11.08.2012
8.	Hypolipidemic activity of Kadukkai chooranam.	Dr. F. Priya	Total number of animals proposed was 48 rats, and it was advised to minimize the number to 40 rats only.	XIII/VELS/PCOL/08/2000/CPCSEA/IAEC/11.08.2012

Dr. J.ANBU, M.Pharm., Ph.D., D.M.L.T.,MBA
Professor & Head
Department of Pharmacology & Toxicology
School of Pharmaceutical Sciences
Vels University
Pallavaram, Chennai-600 117.

City Centre : No. 521/2, Anna Salai, (Opp. G.R. Complex), Nandanam, Chennai - 600 035.
Phone / Fax : (91-44) 2431 5541 / 2431 5542

Bio-Chemical Analysis

BIOCHEMICAL ANALYSIS OF TRIAL MEDICINES

Preparation of Sodium Carbonate extract: 2 gm of the sample drug is mixed 5 gm of Sodium carbonate and taken in a 100 ml beaker and 20 ml of distilled water is added. The solution is boiled for 10 minutes, cooled and then filtered. The filtrate is called sodium carbonate extract.

S.No.	Experiment	Observation	Inference
1	**Test for Acid Radicals**		
a.	**Test for Sulphate** 2 ml of the above prepared extract is taken in a test tube. To this add 2ml of 4% Ammonium oxalate solution.	Absence of White Precipitate	Absent
b.	2ml of extract is added with 2ml of dilute hydrochloric acid until the effervescence ceases off. Then 2ml barium chloride solution is added.	Absence of White Precipitate	Absent
2.	**Test for Chloride:** 2ml of extract is added with dilute nitric acid till the effervescence ceases. Then 2ml of silver nitrate solution is added.	Absence of white precipitate.	Absent

3.	**Test for Phosphate** 2ml of the extract is treated with 2 ml of Ammonium molybdate solution and 2ml of concentrated nitric acid.	Absence of Yellow Precipitate	Absent
4.	**Test for Carbonate:** 2ml of the extract is treated with 2ml of magnesium sulphate solution.	Absence of white precipitate	Absent
5.	**Test for Sulphide:** 1 gm of the substance is treated with 2ml of concentrated Hydrochloric acid	Absence of Rotten egg smelling	Absent
6.	**Test for Nitrate:** 1gm of the substance is heated with copper turnings and concentrated sulphuric acid and viewed the test tube vertically down.	Absence of reddish brown gas.	Absent
7. a.	**Test for Fluoride and oxalate** 2ml of the extract is added with 2ml of dilute acetic acid and 2ml of calcium chloride solution and heated.	Absence of white precipitate	Absent
b.	5 drops of clear solution is added with 2ml of dilute sulphuric acid and slightly warmed to this, 1 ml of dilute potassium permanganate solution is added.	Absence of KMNO4 solution discolourisation.	Absent

8.	**Test for Nitrite** 3 drops of the extract is placed on a filter paper. On that, 2 drops a Acetic Acid and 2 drops of Benzidine solution is placed.	Absence of yellowish red colour	Absent
9.	**Test for Borate** 2 pinches of the substance is made into paste by using Sulphuric acid and Alcohol (95%) and introduced into the blue flame.	Absence of Green tinged flame	Absent
II.	**TEST FOR BASIC RADICALS**		
10.	**Test for lead** 2 ml of the extract is added with 2 ml of Potassium iodide solution	Absence of Yellow precipitate	Absent
11a	**Test for Copper** One pinch of substance is made into paste with concentrated Hydrochloric acid in a watch glass and introduced into the non luminous part of the flame.	Absence of Bluish green coloured flame.	Absent
b.	2ml of the extract is added with excess of Ammonia solution	Absence of deep blue	Absent
12.	**Test for Aluminium** To the 2 ml of extract. Sodium Hydroxide solution is added in drops to excess.	Absence of White precipitate.	Absent

13a	**Test for Iron** To the 2 ml of extract, 2 ml of Ammonium Thiocyanate solution is added.	Absence of Blood red colour	Absent
b.	To the 2 ml of extract, 2 ml of Ammonium Thiocyanate solution and 2 ml of concentrated Nitric Acid is added.	Absence of Blood red colour.	Absent
14.	**Test for Zinc** To the 2 ml of extract Sodium Hydroxide solution is added in drops to excess.	White precipitate Obtained	Present
15.	**Test for Calcium** 2 ml of the extract is added with 2 ml of 4% Ammonium Oxalate solution.	White precipitate Obtained	Present
16.	**Test for Magnesium** 2ml of extract, Sodium Hydroxide solution is added in drops to excess.	White precipitate Obtained	Present
17.	**Test for Ammonium** 2 ml of extract few ml of Nessler's Reagent and excess of Sodium Hydroxide solution are added.	Absence of Reddish brown precipitate .	Absent
18.	**Test for Potassium** A pinch of substance is treated with 2 ml of Sodium Nitrite	Absence of Yellow precipitate.	Absent

	solution and then treated with 2 ml of Cobal Nitrate in 30% glacial Acetic acid.		
19.	**Test for Sodium** 2 pinches of the substance is made into paste by using Hydrochloric acid and introduced into the blue flame.	Absence of Yellow colour flame	Absent
20.	**Test for Mercury** 2 ml of the extract is treated with 2 ml of Sodium Hydroxide solution.	Absence of yellow precipitate	Absent
21.	**Test for Arsenic** 2 ml of extract is treated with 2 ml of silver Nitrate solution	Absence of Yellow precipitate.	Absent
22.	**Test for Starch** 2ml of extract is treated with weak iodine solution	Absence of Bluecolour	Absent
23.	**Test of reducing Sugar** 5ml of Benedicts qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 10 drops of the extract and again boiled for 2 minutes. The colour changes are noted.	Absence of Green colour	Absent
24.	**Test of the alkaliods** 2ml of the extract is treated with 2ml of potassium lodide solution.	Absence of Red colour	Absent

25.	**Test of the proteins** 2ml of the extract is treated with 2ml of 5% NaOH ,mix well and add 2 drops of copper sulphate solution.	Absence of Violet colour	Absent

RESULTS:

The given sample contains.

Drug Name (Kanthaga parpam) –

a. Zinc
b. Calcium
c. Megnesium

Toxicological study

ACUTE AND SUB ACUTE TOXICITY STUDY ON KANTHAGA PARPAM

Animals

Mice of either sex weighing 25-30g and rats weighing 210-240g were obtained from the animal house of Vels University. The animals were used with the approval of the Institute animal ethics committee and obtained from Vels University, Chennai. They were fed with a balanced standard pellet diet and maintained under standard laboratory conditions, providing 24-28^{0}Ctemperature, standard light cycle (12 h light, 12 h dark) and water ad libitum. Animals were kept in cages with raised floors of wide mesh to prevent coprophagy. Animal welfare guidelines were observed during the maintenance period and experimentation. The rats were randomly assigned to control and different treatment groups, six animals per group. The animals were acclimatized for one week under laboratory conditions.

ACUTE TOXICITY STUDY-OECD 425 GUIDELINES

Acute oral toxicity test for the KanthagaParpam was carried out as per OECD Guidelines 425. As with other sequential test designs, care was taken to ensure that animals are available in the appropriate size and age range for the entire study. The test substance is administered in a single dose by gavage using a stomach tube or a suitable intubation cannula. The fasted body weight of each animal is determined and the dose is calculated according to the body weight. After the substance has been administered, food was withheld for a further 2 hours in mice. The animals were observed continuously for the first 4

h and then each hour for the next 24 h and at 6 hourly intervals for the following 48 h after administering of the test drug, to observe any death or changes in general behaviour and other physiological activities. Single animals are dosed in sequence usually at 48 h intervals. However, the time interval between dosing is determined by the onset, duration, and severity of toxic signs. Treatment of an animal at the next dose was delayed until one is confident of survival of the previously dosed animal.

Observation of toxicity signs: General behavior, respiratory pattern, cardiovascular signs, motor activities, reflexes, change in skin and fur, mortality and the body weight changes were monitored daily. The time of onset, intensity, and duration of these signs, if any, was recorded.

SUB-ACUTE TOXICITY

In a 28-days sub acute toxicity study, 24 either sex rats were divided into four groups of 6 rats each. Group I that served as normal control was administered with distilled water (p.o.) while groups II, III and IV were administered daily with the Kanthaga Parpam (p.o.) for 28 days at a dose of 12.5, 25 and 50mg/kg respectively. The animals were then observed daily for gross behavioural changes and any other signs of subacute toxicity. The weight of each rat was recorded on day 0 and weekly throughout the course of the study, food and water consumption per rat was calculated. At the end of the 28 days they were fasted overnight, each animal was anaesthetized with diethylether, following which they were then dissected and blood samples were obtained by cardiac puncture into heparinised tubes. The blood sample

collected from each rat was centrifuged with 3000 X g at 4^{o}C for 10 min to separate the serum and used for the biochemical assays.

Hematological and blood biochemical analyses:

At the end of the study, all animals were kept fasted for 16-18 h and then anesthetized with anesthetic ether on the 28th day. Blood samples for hematological and blood chemical analyses were taken from retro orbital vein. Heparinized blood samples were taken for determining complete blood count (white blood cell count, differential white blood cell count, platelet count, red blood cell count, hematocrit, and hemoglobin) by semiautomated hematology analyzer. The serum from non-heparinized blood was carefully collected for blood chemistry and enzyme analysis (glucose, creatinine, total protein, albumin, total and direct bilirubins, serum glutamate-oxaloacetate transaminase (SGOT), serum glutamate pyruvate transaminase (SGPT), and alkaline phosphatase (ALP)) were automatically determined using autoanalyzer.

Necropsy:

All rats were sacrificed after the blood collection. The positions, shapes, sizes and colors of internal organs were evaluated. The Spleen, Testes, Pancrea, Lung, Liver, Brain, Heart, Stomach, Intestine, Bone, Ovary, and Kidney tissues were excised from all rats to visually detect gross lesions, and weighed to determine relative organs' weights and preserved in 10% neutral formalin for histopathological assessment. The tissues were embedded in paraffin, and then sectioned, stained with haematoxylin and eosin and were examined microscopically.

Statistical analysis

Values were represented as mean ± SEM. Data were analysed using one-way analysis of variance (ANOVA) and group means were compared using the Tukey-Kramer Multiple Comparison test using GraphPad Instat-V3 software. $P < 0.05$ were considered significant.

RESULTS

Animals treated with Kanthaga Parpam above 25mg/kg were shown significant toxic clinical signs during the dosing period of 28 days. All animals from control and all the treated dose groups not survived throughout the dosing period of 28 days and it was found two animal dead after 20days of treatment in moderate and high dose. Results of body weight determination of animals of control and different dose groups exhibited body weight loss throughout the dosing period of 28 days. During dosing period, the quantity of food consumed by animals from different dose groups was found to be comparable and normal with that of control animals.

Ophthalmoscopic examination of animals in control and Kanthaga Parpam treated group revealed remarkable abnormality in liver and kidney. Urine analysis data of control group and treated group of animals determined in week 4 did not reveal any significant abnormalities except pH changes. Comparison of organ weights of treated animals with respective control

animals on day 28 was found to be altered. Gross pathological examination of animals in the Kanthaga Parpam treated group revealed abnormalities.

The results of haematological investigations conducted on day 28, revealed changes in the values of different parameters investigated when compared with those of respective controls; Results of Biochemical investigations revealed the few significant changes in the values of different parameters studied when compared with those of respective controls; however, the values obtained were within biological and laboratory limits.

CONCLUSION

In the present toxicological investigation, toxic effect was observed at both 25 and 50mg/kg of Kanthaga Parpam treated via oral route over a period of 28 days. So, it can be concluded that the Kanthaga Parpam can be prescribed for therapeutic use in human with the dosage minimization of upto 12.5mg/kg. body weight p.o. and also recommended for necessary close monitoring of signs of toxicity.

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1. Table 1: Dose finding experiment and its behavioral Signs of Toxicity

No	Dose mg/kg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	250	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	500	+	+	-	+	-	+	-	+	-	-	-	-	-	-	+	-	-	+	+	+
	1000	+	+	-	+	-	+	-	+	+	+	-	-	-	+	+	+	+	+	+	+
	2000	+	+	-	+	-	+	-	+	+	+	-	-	-	+	+	+	+	+	+	+

2. 1. Alertness 2. Aggressiveness 3. Pile erection 4. Grooming 5. Gripping 6. Touch Response 7. Decreased Motor Activity 8. Tremors 9. Convulsions 10. Muscle Spasm 11. Catatonia 12. Muscle relaxant 13. Hypnosis 14. Analgesia 15.Lacrimation 16. Exophthalmos 17. Diarrhoea 18. Writhing 19. Respiration 20. Mortality

3. **Table 2. Body wt (g) of rats exposed to *Kandhaga Parpam* for 28days**.

Dose (mg/kg/day)	Days				
	1	**7**	**14**	**21**	**28**
Control	120.10±5.34	125.52±5.05	128.10±4.18*	132.54±4.64*	135.19±5.00**
12.5	125.88±4.24	128.21±4.15	127.37±5.11	130.33±4.15	130.20±5.14
25	128.21±5.52	125.12±4.91	122.15±5.02	120.00±5.11*	120.42±5.01*
50	130.34±4.11	125.10±5.84	124.25±4.62*	125.18±5.14*	121.20±4.20**

4. Values are mean ± S.E.M. (Dunnet ’t' test). *P>0.05. N=6.

5. Table 3. Food intake of rats exposed to *Kandhaga Parpam* for 28days.

Dose (mg/kg/day)	Days (gms/rats)				
	1	**7**	**14**	**21**	**28**
Control	45.28±2.25	45.14±2.28	45.25±2.25	46.12±2.24	47.17±2.12
12.5	44.41±2.50	46.42±2.51	44.30±2.53	45.00±2.18	44.16±3.11
25	46.24±2.34	45.10±2.38	45.23±2.42	45.51±2.10	45.14±2.10
50	45.12±2.72	45.55±2.26	44.48±2.84	45.30±2.44	45.28±2.15

6. Values are mean ± S.E.M. (Dunnet 't' test). $^{ns}P>0.05$. N=6.

7. Table 4. Water intake of rats exposed to *Kandhaga Parpam* for 28days.

Dose (mg/kg/day)	Days(ml/rat)				
	1	**7**	**14**	**21**	**28**
Control	46.14±2.53	50.12±2.24	50.22±3.15	51.21±2.18	50.12±3.12
12.5	45.10±2.20	45.15±2.17	51.12±3.22	44.42±2.80	49.27±2.24
25	48.52±2.32	45.42±3.04	45.00±2.00	45.12±2.51	45.42±3.04
50	50.18±2.55	50.55±2.10	50.41±2.12	48.18±2.15	45.45±2.42

8. Values are mean ± S.E.M. (Dunnet 't' test). $^{ns}P>0.05$.. N=6.

9. Table 5. Hematological parameters after 28days treatment with *Kandhaga Parpam*.

Parameter	Control	12.5mg/kg	25mg/kg	50mg/kg
Red blood cell (mm^3)	5.10±0.42	5.00±0.36	4.18±0.29**	4.32±0.44*
HB (%)	17.27±0.32	15.12±0.22	14.56±0.30**	14.01±0.28**
Leukocyte ($x10^3$/Cu.mm)	8.88±1.2	8.12±0.71	7.05±0.92	6.79±1.05*
Platelets(K/µl)	454±12.14	480±20.21	475±23.12	448±22.11
MCV (gl)	52.10±4.00	54.05±4.82	54.12±4.65	54.80±4.51
Neutrophil	15.28±1.15	15.12±0.90	15.51±0.84	15.12±3.24
Lymphocyte	82.10±2.12	80.18±2.75	88.14±3.36	89.10±3.78
Monocyte	1.48±0.30	1.51±0.32	1.39±0.30	1.42±0.22
Eosinophil	1.00±0.14	1.00±0.20	1.00±0.12	1.00±0.10
Basophil	0±0.00	1±0.00	0±0.00	1±0.00
ESR(mm)	1±00	4±0.02**	6±0.04**	7±0.05**
PCV	57.18±2.51	54.52±2.92	55.48±3.22	56.42±3.14

10. Values are mean ± S.E.M. (Dunnet ’t' test). **P<0.01. N=6.

11. Table 6. Effect of treatment with *Kandhaga Parpam* biochemical parameters

Dose (mg/kg)	Control	12.5mg/kg	25mg/kg	50mg/kg
Total Bilirubin (mg/dL)	0.30±0.05	0.32±0.04	0.33±0.05	0.35±0.06*
Bilirubin direct (mg/dL)	0.24±0.03	0.28±0.05	0.28±0.05	0.31±0.04*
ALP (U/L)	102.20±4.12	105.14±6.00	107.55±5.24	109.25±5.15**
SGOT (U/L)	110.18±4.33	112.54±4.41	117.20±5.12	112.22±5.44
SGPT(U/L)	35.24±2.84	34.55±2.20	34.51±2.18	36.56±2.25
Total Protein(g/dl)	6.22±1.52	6.10±1.14	6.12±0.92	8.12±0.70
Albumin(g/dl)	2.10±0.20	2.17±0.27	3.28±0.32*	3.14±0.14
Globulin(g/dl)	4.88±0.17	5.00±0.22	5.10±0.24*	4.98±0.21

12. Values are mean ± S.E.M. (Dunnet 't' test). *P<0.05; **P<0.01 V*s* Control N=6.

13. Table-7 RFT

Dose (mg/kg)	Control	12.5mg/kg	25mg/kg	50mg/kg
Urea (mg/dL)	4.48±1.56	4.90±2.28	5.65±2.00	6.88±1.10**
Creatinine (mg/dL)	0.70±0.04	0.72±0.05	0.74±0.05*	0.78±0.04**
Uric acid (mg/dL)	3.58±0.12	4.35±0.10	4.69±0.14**	5.05±0.10*
Na m.mol	112.42±5.11	118.20±4.20	116.42±5.42	121.10±3.68**
K m.mol	6.10±2.51	6.00±1.14	6.25±1.35	6.14±2.42
Cl m.mol	102.4±4.12	105.28±5.10	105.20±4.55	104.65±5.21

14. Values are mean ± S.E.M. *P<0.05; **P<0.01. V*s.* Control N=6

15. **Table-8. Lipid Profile**

Dose (mg/kg)	Control	12.5mg/kg	25mg/kg	50mg/kg
Total cholestrol(mg/dL)	72.18±2.24	72.45±2.12	74.05±3.22	73.24±2.17
HDL(mg/dL)	125.22±2.48	125.24±2.80	126.42±3.72	125.14±2.99
LDL(mg/dL)	41.40±2.54	41.55±2.18	42.72±2.83	42.11±3.12
VLDL(mg/dl)	25.72±2.48	25.64±2.34	26.00±2.56	26.10±2.24
Triglycerides (mg/dl)	26.51±3.12	25.50±2.28	25.44±2.11	25.42±2.71
Blood glucose(mg/dl)	92.00±4.00	91.12±4.42	92.10±4.24	92.20±2.65

16. Values are mean ± S.E.M. (Dunnet 't' test). $^{ns}P>0.01$ Vs Control N=6.

17. Table-9 Urine Analysis

Parameters	Control	12.5mg/kg	25mg/kg	50mg/kg
Colour	Yellow	Yellow	Dark Brown	Reddish Yellow
Transparency	Clear	Slightly turbid	cloudy	Turbid
Specific gravity	1.010	1.010	1.010	1.010
PH	>7.2	>8.0	>8.2	>8.4
Protein	Nil	1+	1+	2+
Glucose	Nil	Nil	Nil	Trace
Bilirubin	-ve	-ve	-ve	-ve
Ketones	-ve	-ve	+ve	+ve
Blood	Absent	Absent	Absent	Absent
Urobilinogen	Normal	Normal	Normal	Normal
Pus cells	0-cells/HPF	1-cell/HPF	2-cells/HPF	1-cell/HPF
RBCs	Nil	Nil	0-1cells/HPF	Nil
Epithelial cells	Nil	1-cell/HPF	Nil	1-cell/HPF
Crystals	Nil	Nil	Nil	Nil
Casts	Nil	Nil	Nil	Nil
Others	Bacteria seen	Bacteria seen	Bacteria seen	Bacteria seen

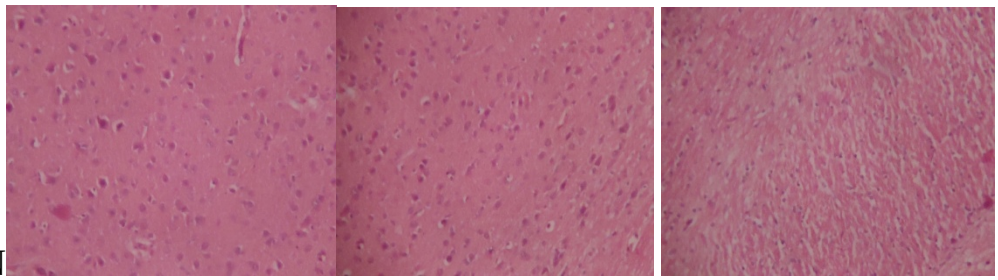
18. Table 10. Effect of *Kandhaga Parpam* on organ weight

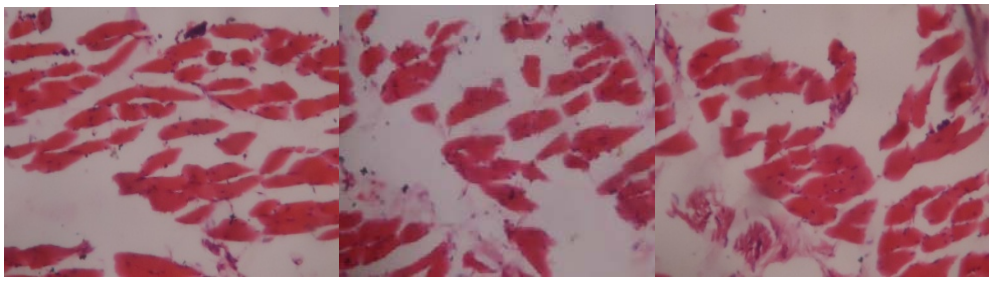
Dose (mg/kg)	Control	12.5mg/kg	25mg/kg	50mg/kg
Liver (g)	3.12±0.12	3.12±0.10	3.00±0.12	2.88±0.14*
Heart (g)	0.30±0.04	0.30±0.03	0.31±0.02	0.31±0.04
Lung (g)	0.45±0.10	0.44±0.11	0.45±0.12	0.44±0.15
Spleen (g)	0.45±0.04	0.45±0.04	0.45±0.05	0.46±0.04
Ovary (g)	1.71±0.26	1.65±0.22	1.71±0.22	1.67±0.25
Testes (g)	2.12±0.10	2.41±0.12	2.32±0.14	2.42±0.16
Brain (g)	1.20±0.16	2.12±0.10	2.15±0.12	2.12±0.15
Kidney (g)	0.80±0.05	0.80±0.06	0.78±0.04*	0.75±0.04*
Stomach (g)	1.10±0.10	1.12±0.10	1.14±0.11	1.13±0.13

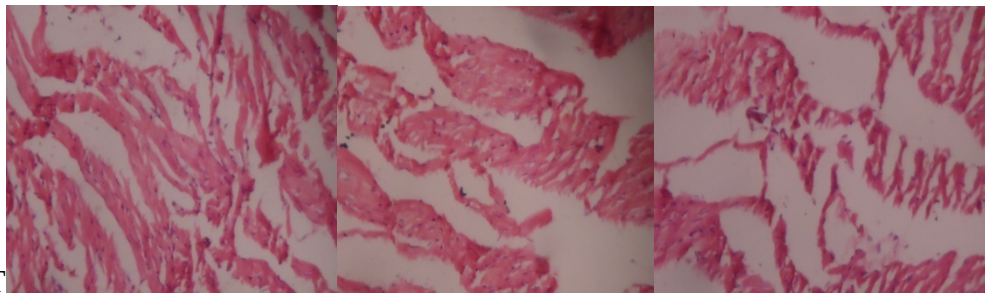
19. Values are mean ± S.E.M. (Dunnet ’t' test). *P<0.05 Vs Control N=6.

HISTOPATHOLOGY OF KANTHAGA PARPAM

12.5mg 25 mg 50 mg

BRAIN 

BONE 

HEART 

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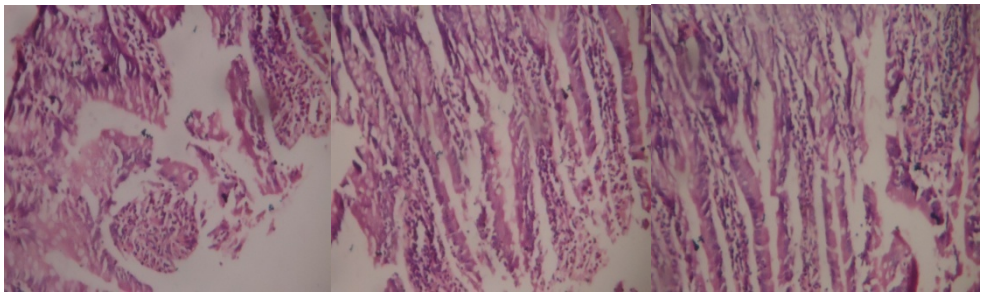

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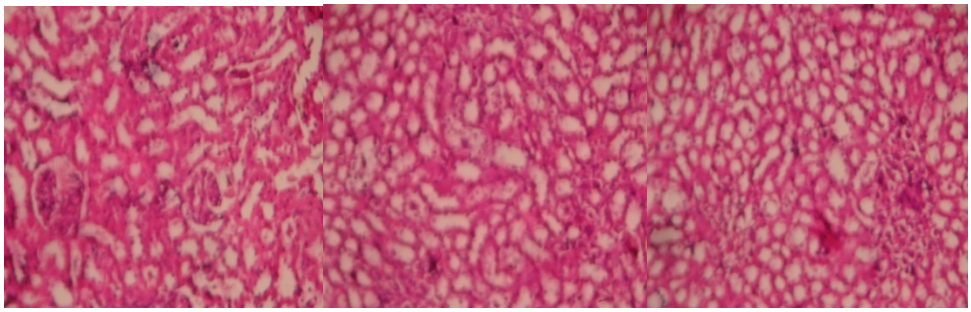
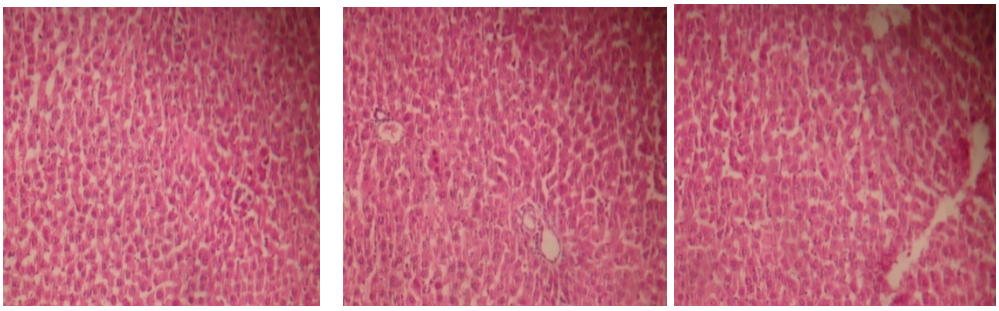
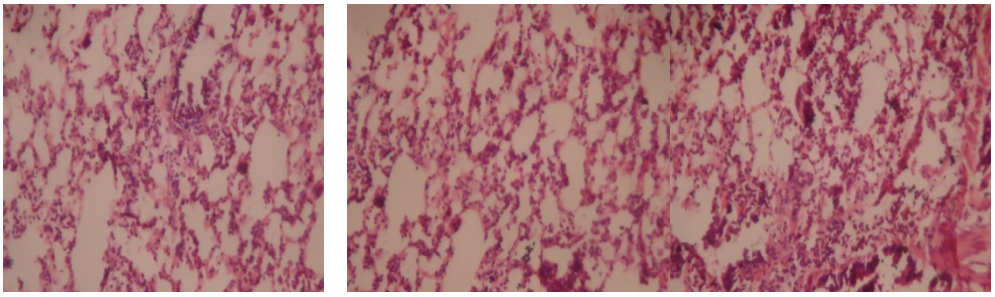
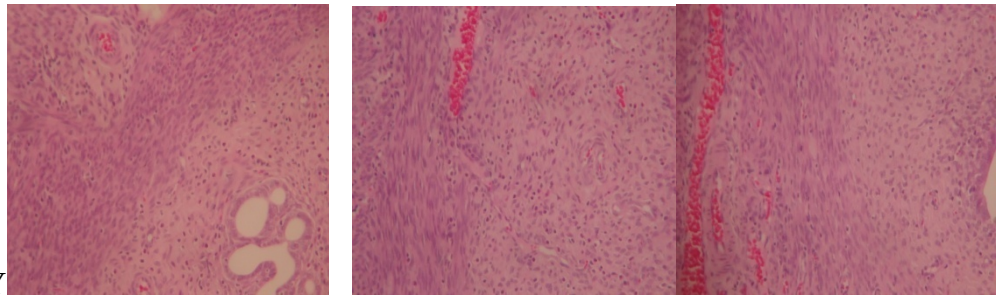
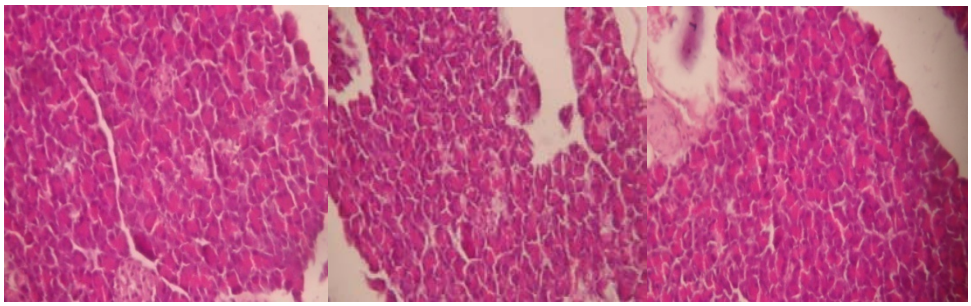
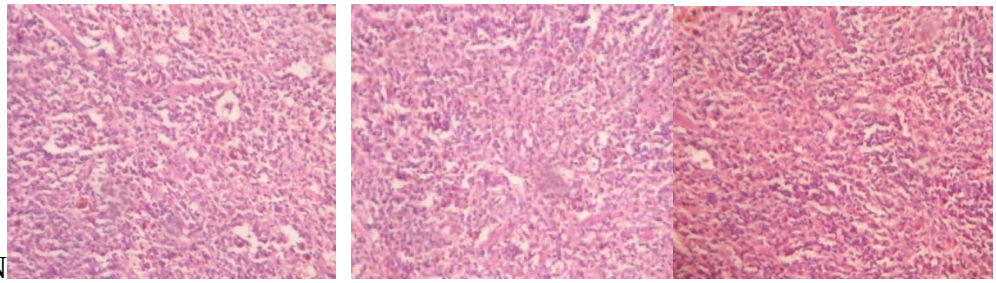
KIDNEY			
LIVER			
LUNG			
OVARY			

12.5 mg 25 mg 50 mg

PANCREAS



SPLEEN 

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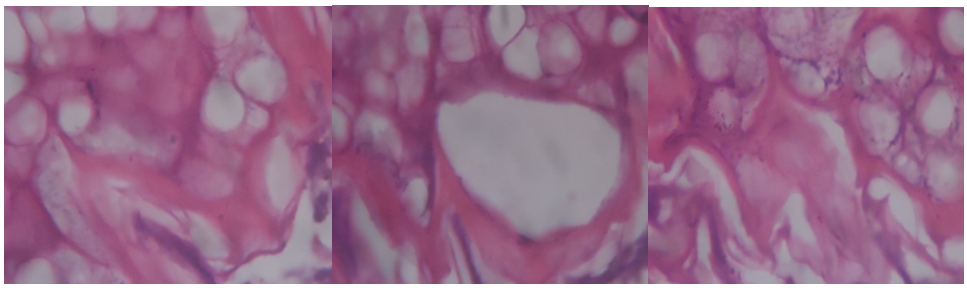
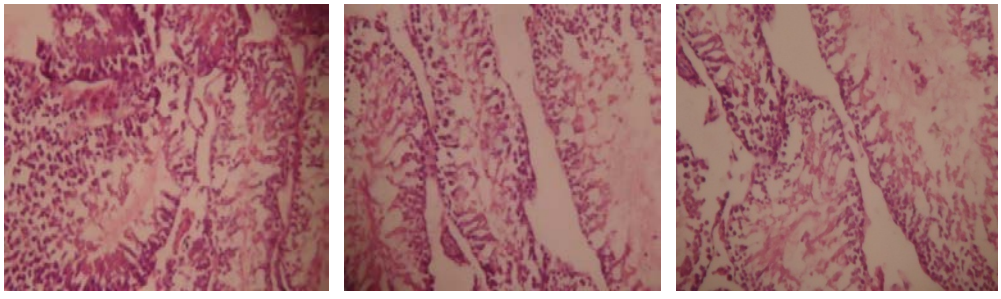


TESTI 

Pharmacological study

ANTIARTHRITIC ACTIVITY OF KANTHAGA PARPAM IN COMPLETE FREUND'S ADJUVANT INDUCED ARTHRITIC RATS

INTRODUCTION

Every day antiarthritic drugs are taken by more than 30 million people worldwide; of these, 40% of consumers are older than 60. Population studies have shown that 10–20% of all people who are 65 years or older either are currently receiving or have recently received a prescription for nonsteroidal antirheumatic drugs. During the next 20 years the number of people over 65 is expected to increase from 380 million to 600 million.

The very frequent use of NSAIDs is based on the fact that these agents have many indications for which a large number of patients exist. These indications include chronic polyarthritis, psoriatic arthritis, ankylosing spondylitis, osteoarthritis, gout, inflammatory soft tissue rheumatism, low back pain, postoperative and post-traumatic inflammation, thrombophlebitis and vasculitis. Over the past 140 years chemical substances have been introduced for therapy, collectively termed nonsteroidal anti-inflammatory drugs. Cyclo-oxygenase, also known as prostaglandin H synthase, catalyzes the conversion of arachidonic acid to the prostaglandin endoperoxides PGG 2 and PGH 2, with the addition of two oxygen molecules. In this pathway two reaction steps can be differentiated, catalyzed by different domains of the cyclo-oxygenase protein. The first is the cyclo-oxygenase reaction, and the second is the peroxidase reaction.

Prostaglandins are formed in numerous types of cell within an organism. Their effects are complex and depend on the type of target cells, among other factors. For this reason it is difficult

to generalize the physiological roles of individual prostaglandins, because the same compound can some-times exert even opposite effects on different types of target cell. Prostaglandins are important in the regulation of thrombocyte aggregation, inflammatory processes, pain and fever induction, the regulation of vessel perfusion, and many other processes.

From these properties one can deduce the spectrum of activity of prostaglandin biosynthesis inhibitors such as indomethacin, ibuprofen and acetyl salicylic acid: NSAIDs function as anti-inflammatory, antipyretic and analgesic substances. NSAIDs that are not COX-2 selective produce GI side effects in between 20% and 40% of all individuals who take them. The extent of this disease, known as NSAID-gastropathy, varies considerably from asymptomatic mucosal damage that is detectable only with an endoscope, through gastric pain, heartburn and dyspepsia, to life-threatening, bleeding, gastric or duodenal ulcers.

Older women are more predisposed than older men towards developing an NSAID-induced ulcer, in which the stomach is more often involved than the duodenum. In more than 10–20% of patients, the first manifestation of an NSAID gastropathy can be a severe GI complication. Various studies have identified the following risk factors for NSAID-induced GI side effects that can in part be brought into the planning of prophylaxis: simultaneous corticosteroid therapy, earlier GI side effects, high dosage and long duration of NSAID therapy, advanced patient age, alcoholism, handicaps, and simultaneous anticoagulant therapy. When these risk factors are present, the indication for NSAID therapy must be thoroughly scrutinized.

Arthritis means an inflamed joint. A joint normally consists of two cartilage-covered bone surfaces that glide smoothly against one another. When joints become inflamed, the joint swells and does not move smoothly. Over time, the gliding surface wears out. There are many types of arthritis. Rheumatoid arthritis is just one type. Wear and tear arthritis (osteoarthritis), gouty arthritis, and psoriatic arthritis are three other common types. Rheumatoid Arthritis is considered a systemic disease. That is, it can affect many parts of the body. Patients often awaken with stiff and swollen joints. Early on, many patients feel tired. Two thirds of patients with rheumatoid arthritis have wrist and hand problems.

Rheumatoid arthritis affects the cells that lubricate and line joints. This tissue – synovium- becomes inflamed and swollen. The swollen tissues stretch

supporting structures of the joints such as ligaments and tendons. As the support structures stretch out, the joints become deformed and unstable. The joint cartilage and bone erode. Often the joints feel hot and look red. Rheumatoid arthritis of the hand is most common in the wrist and knuckles. The disease is symmetric, thus what occurs in one hand usually occurs in the other.

Signs and symptoms of rheumatoid arthritis

While stiffness, swelling, and pain are symptoms common to all forms of arthritis, there are some symptoms that are classic features of rheumatoid arthritis. They are: Firm nodules along fingers or the elbow, Soft lump on the back of the hand that moves as the fingers straighten, Angulation or collapse of fingers, Sudden inability to straighten or bend a finger because of a tendon rupture, Deformity in which the middle finger joint becomes bent, Deformity where the end of the finger is bent and the middle joint over extends, Prominent bones in the wrist. In addition, patients with rheumatoid arthritis often have problems with numbness and tingling in their hand (carpal tunnel syndrome) because the swelling of the tendons causes pressure on the adjacent nerve. They may make a squeaky sound as they move joints (crepitus) and sometimes the joints snap or lock because of the swelling.

The current treatment of rheumatoid arthritis is intended to minimize the associated pain and inflammation using non-steroidal anti-inflammatory drugs as well as to decelerate the progress of the disease by using disease-modifying anti-rheumatic drugs. NSAIDs may be more effective in the treatment of rheumatoid arthritis, but there is a scarcity of such drugs acting through multiple mechanisms.

Hence, the treatment of rheumatoid arthritis involves the combined use of NSAIDs and disease modifying anti-rheumatic drugs. Due to chronic nature of rheumatoid arthritis, advanced age of the patients and adverse reactions of the NSAIDs and disease-modifying anti-rheumatic drugs, the arthritic patients tend to search for alternative treatments that are effective and less toxic and reduce the pill burden. Hence, they commonly prefer complementary and

alternative medicines. Hence, in the present work was designed to evaluate the safety and antiarthritic potential of traditionally used Kanthaga parpam in siddha system of medicine in a scientific manner.

MATERIALS AND METHODS

Drugs, Chemicals and Preparation of stock Solution

Diclofenac sodium and Carboxy methyl Cellulose were obtained from Sigma Aldrich, USA. Incomplete Freund's adjuvant and Mycobacterium tuberculosis H37RA was obtained from DIFFCO Laboratories. CFA emulsified solution was prepared by triturating 1 mg of non viable, desiccated Mycobacterium tuberculosis in 1 ml of Fruend's adjuvant. Diclofenac was prepared by dissolving in water for injection. Kanthaga Parpam was dissolved in 2% of CMC and made into suspension form.

Animals

Wistar rats of either sex (100–150 g weight) were used in this study. The animals were maintained in plastic cages at 22 ± 2°C with free access to pellet food and water. The experimental protocols were approved by the Institutional Animal Ethical Committee (Approval. No. XIII/VELS/PCOL/07/2000/CPCSEA/IAEC/08.08.2012)constituted as per the rules of the Committee for the Purpose of Control and Supervision of Experiments on Animals.

CFA-Induced Arthritis in Rats

Each treatment group contained six Wistar rats. The rats were randomly divided into four groups: CFA control, Kanthaga Parpam (25 mg kg^{-1} day^{-1}, p.o.), Kanthaga Parpam (50 mg kg^{-1} day^{-1}, p.o.), and Diclofenac sodium (45 mg kg^{-1} day^{-1}, p.o.). On day 0, arthritis was induced by injection of 100 μL CFA, containing heat-killed and dried Mycobacterium tuberculosis into the paw of the right hind limb of each rat. The Severity of Arthritis was evaluated with the consideration of the

primary and secondary lesions, that is, paw volumes of injected and non-injected paws, were measured using a plethysmometer, after which adjuvant was administered. The lesions were measured again on the 7th, 14th, and 21st days after injection of the adjuvant.

During the experimental period, the body weight was measured using a digital weighing balance every 3rd day after adjuvant injection. The severity of arthritis was recorded by a blinded observer using the visual arthritis scoring systems. The arthritis score ranged from 0 to 4; where 0 indicates the least but definite swelling and 4 represents the maximum swelling. This scoring system involves observations of all four paws and giving a separate score for each limb. Scores were assigned (Data not shown) for evaluation of the pain associated with the arthritis.

Apart from this, the haematological parameters were evaluated using routine laboratory methods. The level of serum CRP and RF was determined using commercial kits. Similarly, On day 21, animals were anesthetized with anesthetic ether. The severity of the swelling of the soft tissue around the joints of the hind paws, periarticular bone resorption, periarticular bone erosion and narrowing of the joint space were evaluated.

Statistical Analysis

The results are expressed as the mean ± SEM. The significance of the difference was evaluated by one-way ANOVA followed by Dunnet's multiple comparisons test. Data were considered statistically significant if $P<0.05$.

RESULTS

Observations such as the paw volumes, body weight, hematological and biochemical parameters were recorded on the 7th, 14th, and 21st days after adjuvant injection. The CFA-induced arthritis control group showed signs of arthritis development, as seen by the increase in the paw volumes in both CFA-

injected and CFA-non-injected paws, which indicates primary and secondary arthritic lesions. Other indications, such as a decreased body weight and alterations in the arthritis scores, also showed induction of arthritis in the CFA-treated control group rats.

The assessment made on the 21st day showed that the standard drug Diclofenac sodium and Kanthaga Parpam treatments had significantly reduced the adjuvant-induced primary and secondary lesions in the respective treatment groups as compared with the CFA control group. It is noteworthy that the reduction in the secondary lesions was comparable in the Diclofenac sodium-treated and Kanthaga Parpam50 mg/kg treated groups. The average gain in the body weight on day 21 was compared with the initial body weight in each treatment group. The rats in the CFA control group gained less body weight and statistically not significant as compared with the Kanthaga Parpam and Diclofenac sodium-treated groups. This effect on the body weight was clearly evident even at the lowest tested dose of 25 mg/kg of Kanthaga Parpam.

The CFA-induced haematological perturbations, such as an increase in the WBC count, a decreased RBC count, a decreased hemoglobin count and an increased erythrocyte sedimentation rate were also observed in Kanthaga Parpam treatment group of animals. The serum CRP and RF are markers of systemic inflammation and antibody production against the injected adjuvant. High levels of serum CRP (8.24 mg/dL) and serum RF (76 IU/mL) were observed in the CFA control group rats. The Kanthaga Parpam and Diclofenac sodium treatments reduced the increase in the levels of both CRP and RF in the serum. The effects of Kanthaga Parpam were dose-dependent, and the 50 mg/kg dose of Kanthaga Parpam and 4.5 mg/kg dose of Diclofenac sodium had almost equipotent effects in decreasing the serum RF levels.

Kanthaga Parpam treatment favorably affected the pain scores, indicating a significant decrease in the pain associated with the adjuvant-induced arthritis. All the estimated pain scores, including the flexion pain test

score, mobility score and stance score were significantly altered in Diclofenac sodium treated and Kanthaga Parpam (50mg/kg) -treated rats. The reduction in the mobility score was greater in the Kanthaga Parpam (50mg/kg) -treated group as compared with the standard drug treated group. It is clearly observed in the lab investigation and histopathology of joint that the soft tissue swelling around the joints, periarticular bone resorption, periarticular bony erosions and joint space narrowing in the rats treated with Kanthaga Parpam have been protected from the CFA-induced arthritis-related joint changes.

DISCUSSION

Rheumatoid arthritis, which is associated with systemic inflammatory disorders, is a chronic inflammatory disease involving multiple joints. It is an autoimmune disorder of unknown etiology that is characterized by progressive joint destruction, deformity, disability and premature death in most patients. Recent studies have revealed the key roles of pro-inflammatory cytokines, such as tumor necrosis factor-a (TNF-a), interleukin-1b (IL-1b), IL-6 and IL-8 in the pathogenesis of Rheumatoid arthritis. Inflammation, which is a highly coordinated process, is characterized by leukocyte migration into injured tissues.

The transition of leukocytic infiltrate from neutrophils to monocytes is a critical step in the successful resolution of inflammation that is regulated by IL-6 through orchestrating the chemokine-directed attraction and apoptotic clearance of leukocytes. IL-8, CXCL1 and CXCL2 are the main chemotactic mediators involved in neutrophil recruitment. CCL2, on the other hand, is a potent chemoattractant for monocytes. IL-6 and IL-8 are considered early markers of the inflammatory cascade. The correlation between the gene expression of IL-6 and other measured chemokines.

The gene expression of IL-8, however, was not correlated to any of them, suggesting that IL-6 but not IL-8 induces the expression of CCL2, CXCL1 and CXCL2. It is known that various cell types respond to IL-6, which

magnifies the importance of its role in inflammatory conditions. CFA is a mixture of non-metabolizable oil (mineral oil) and mycobacteria. CFA contains heat-killed mycobacteria (*Mycobacterium tuberculosis*) and is more potent to induce hyperalgesic inflammatory reaction.

CFA acts by prolonging the lifetime of injected auto antigen, by stimulating its effective delivery to the immune system and providing a complex set to the innate compartment of the immune system resulting in altered leukocyte proliferation and differentiation. It causes chronic inflammatory response that may be severe and painful for the animal depending on the site as well as the quantity and quality of adjuvant induced. CFA-induced arthritis is the most widely used chronic test model in which the clinical and pathological changes are comparable with those seen in human rheumatoid arthritis.

Chronic inflammation in the CFA model is manifested as a progressive increase in the volume of the injected paw. It is noteworthy that the inhibitory effect of Kanthaga Parpam ($50 mg\ kg^{-1} day^{-1}$) on the volume of the injected paw was comparable with that of Diclofenac sodium ($45 mg\ kg^{-1} day^{-1}$).CFA-induced polyarthritis is associated with an immune-mediated inflammatory reaction and the rat is unique in developing polyarthritis after CFA treatment. The initial reaction of edema and soft-tissue thickening at the depot site in this model is caused by the irritant effect of the adjuvant, whereas the late-phase arthritis and flare in the injected foot are presumed to be immunologic events. The appearance of secondary lesions, that is, non-injected paw swelling is a manifestation of cell-mediated immunity. The suppression of such secondary lesions by a drug shows its immunosuppressive activity.

Kanthaga Parpam effectively reduced the secondary lesions in arthritic rats. Moreover, this effect of Kanthaga Parpam was more potent than that of diclofenac. This reveals potent suppression by Kanthaga Parpam of cell-

mediated immunity in arthritic rats. Similarly, it reduced the arthritic score and secondary paw swelling. A selective reduction in the arthritis score distinguishes the immunosuppressive effects of a drug from its anti-inflammatory effects. The reduction of the arthritis score by Kanthaga Parpam as observed in our study indicates a possible immune suppressant effect. CFA-induced arthritis in rats is associated with an increase in the plasma levels of RF and CRP.

The treatment with Kanthaga Parpam significantly reduced the levels of these biomarkers of inflammation and autoimmune stimulation in the treated rats. This study includes examination of the paws, haematological parameters, body weight changes, organ weight changes and paw withdrawal latency. The visual observations of the rats show that the treatment with Kanthaga Parpam and Diclofenac inhibited the arthritis-associated joint changes. In the Kanthaga Parpam and Diclofenac treated groups there was restoration of the body weights of the rats. A report suggests that the decrease in the body weight during inflammation is due to deficient absorption of nutrients through the intestine and that treatment with anti-inflammatory drugs normalizes the process of absorption.

The evident restoration of the body weight of rats in the Kanthaga Parpam and Diclofenac-treated groups may involve improvement of intestinal absorption of the nutrients and a reduction in the distress caused by the severity of the arthritis. It has been reported that a moderate rise in the WBC count occurs in arthritic conditions due to an IL-1B-mediated rise in the respective colony-stimulating factors. The present study reveals that Kanthaga Parpam 25mg/kg and Diclofenac treatments tend to normalize the WBC count. In addition to this, other characteristic haematological alterations such as the decreased Hb count and increased erythrocyte sedimentation rate were also altered by the Kanthaga Parpam and Diclofenac treatments. It is proposed that the reduction in the Hb count during arthritis results from reduced

erythropoietin levels, a decreased response of the bone marrow erythropoietin and premature destruction of red blood cells.

Similarly, an increase in the ESR is attributed to the accelerated formation of endogenous proteins such as fibrinogen and α/β globulin, and such a rise in the ESR indicates an active but obscure disease process. Thus, the reduction in the ESR and increase in the Hb count brought about by Kanthaga Parpam treatment further support its anti-arthritic effect.

CONCLUSION

In the present study, based on the above results and reasons it can be concluded that the Kanthaga Parpam treatment at a dose of 25 and 50 mg/kg body wt. significantly inhibit the progression of the rheumatoid arthritis in animal models. So, this drug can be used clinically with minimum dose employed in this study.

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Table 2: Effect of Kandhaga Parpam on CFA-induced chronic arthritis in albino rats

Treatment	Dose	Mean paw edema (ml)± S.E.M			
		Day 1	**Day 7**	**Day 14**	**Day 21**
Control	3ml/kg p.o.	0.20± 0.04	0.28±0.05	0.35±0.06	0.25±0.06
Kandhaga Parpam	25 $mg\,kg^{-1}\,day^{-1}$, p.o.	0.16±0.04	0.26±0.04	0.19±0.03	0.16±0.03
Kandhaga Parpam	50 $mg\,kg^{-1}\,day^{-1}$, p.o.),	0.11±0.02	0.18±0.03	0.11±0.03	0.09±0.02
Diclofenac sodium	(45 $mg\,kg^{-1}\,day^{-1}$, p.o.).	0.08±0.02	0.15±0.03	0.12±0.04	0.10±0.03

Results are expressed as mean ± S.E.M. (n=6). The significance of results was considered statistically significant at *P < 0.05

Table 4: Effect of Kandhaga Parpam on Hematological and Biochemical Parameters in CFA-induced arthritic rats

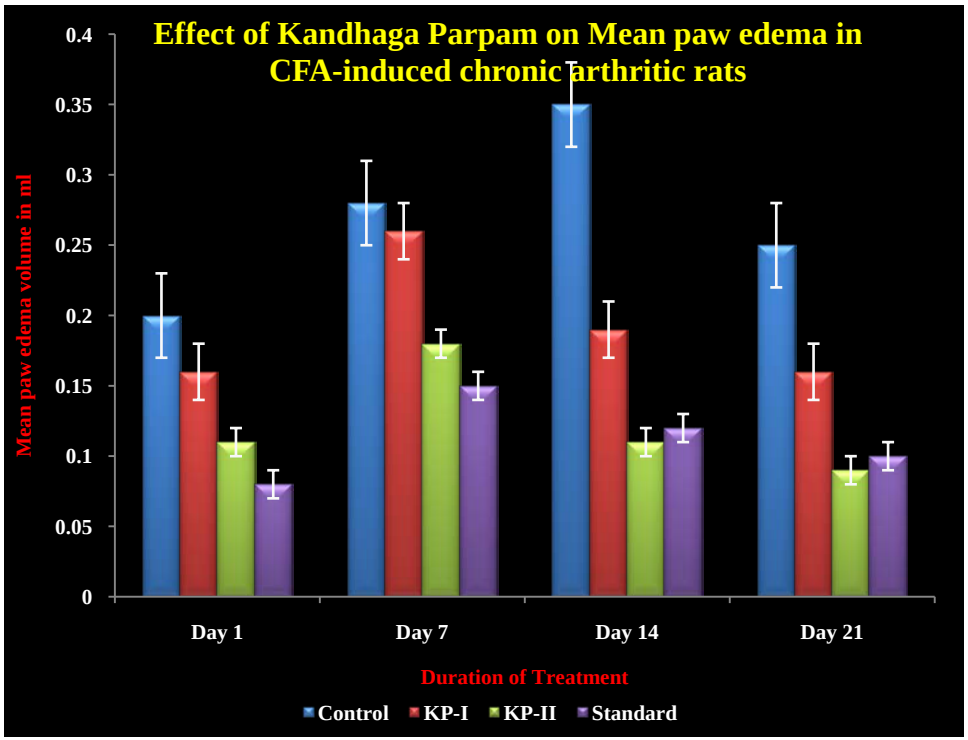
Parameters	Normal control	Arthritic Control	KP (25mg/kg/ day)	KP (50mg/kg/ day)	Diclofenac (45mg/kg/ day)
Hb (g/dl)	18.66 ±1.42	19.00 ± 1.26	17.05 ± 0.92	14.98 ± 0.86	19.04 ± 1.05
PCV (%)	61.58 ± 1.86	59.99 ±1.72	60.77 ±1.28	61.18 ±1.60	61.23 ±1.44
RBC ($x10^6$/ml)	6.24 ± 0.12	6.24± 0.10	5.36 ±0.07**	5.20 ±0.09**	7.64 ± 0.12**
WBC(10^3/mm^3)	9224±206	9310±212	9410±217	9448±256	9324±244
ESR(mm/hr)	2±00**	8.15±0.25	6.52±1.04	4.38±1.42*	3.24±1.00**
Creatinine (mg/dL)	0.44±0.03*	0.68±0.08	0.53±0.07	0.51±0.06	0.49±0.04
Total Protein (g/dL)	5.50±0.18	5.45±0.20	5.54±0.19	6.22±0.23*	5.72±0.21
SGOT (IU/L)	129.11±4.25	131.41±4.72	130.20±5.61	172.11±6.32**	180.02±5.98**
SGPT(IU/L)	44.95±1.72	45.79±2.00	47.02±1.88	46.33±1.51	46.12±1.42
ALP (IU/L)	51.22±4.45	49.64±3.88	50.26±3.95	51.08±4.20	52.00±4.12
CRP (mg/dL)	3.14±0.18**	8.24±0.73	6.20±0.36*	5.03±0.31**	4.64±0.52**
RF (IU/mL)	25.05±0.79**	76.58±2.62	44.16±0.88**	38.51±1.04**	33.25±1.44**

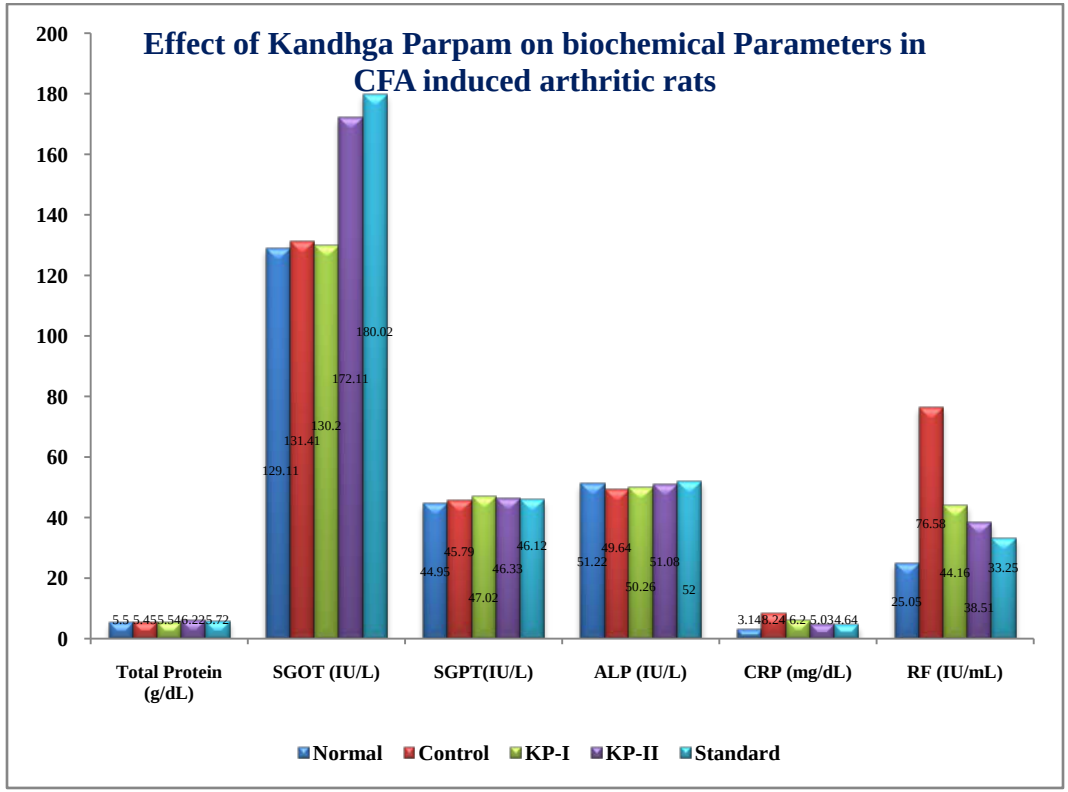
Values are mean ± SEM of 6 animals. One-way ANOVA followed by Dunnet test. *p<0.05, ** p<0.01 Vs arthritic control

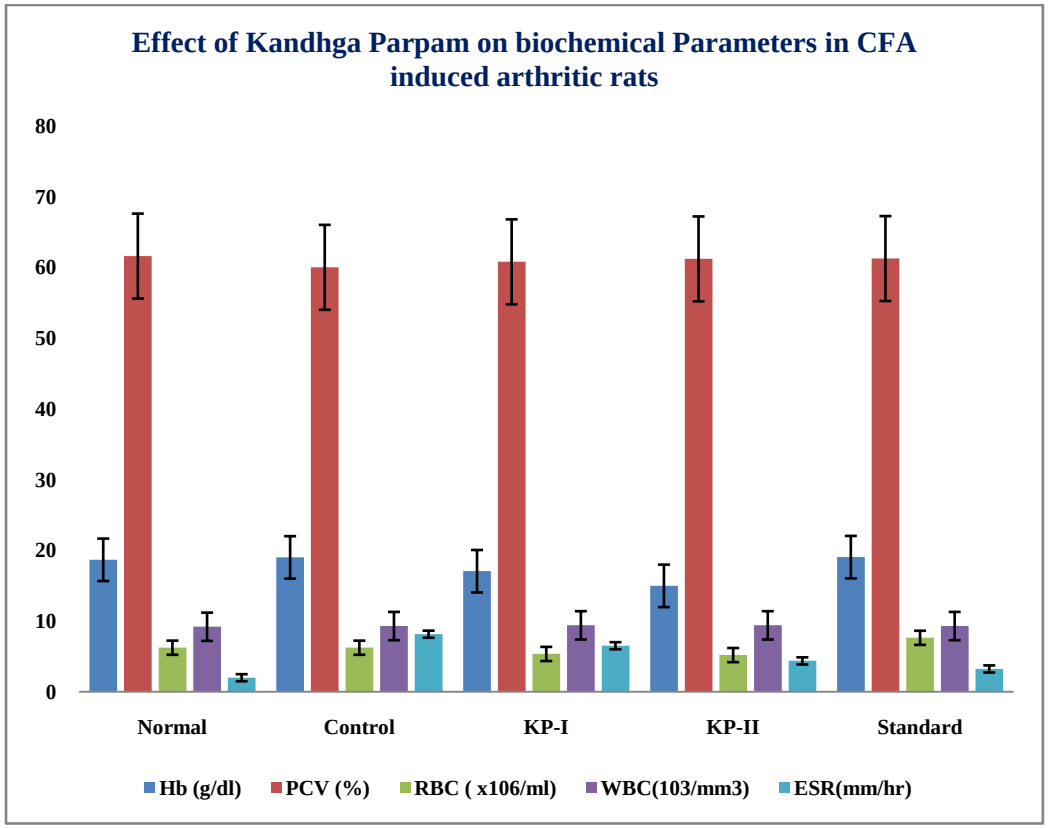
Table 3: Effect of Kandhaga Parpam on body weight changes in CFA-induced arthritic albino rats

Treatment	Dose	Changes in Body Weight (g)			
		Day 1	Day 7	Day 14	Day 21
Normal control	3ml/kg p.o.	118.46 ± 3.69	121.02 ± 2.52	124.60 ± 4.40	126.44 ± 3.64
Arthritic Control (2% CMC)	3ml/kg p.o.	120.15 ± 2.54	122.35 ± 2.47	125.43 ± 5.00	120.63 ± 5.29
Kandhaga Parpam	25 $mg\,kg^{-1}\,day^{-1}$, p.o.	124.24 ± 3.00	126.62 ± 2.50	117.21 ± 5.58	115.43 ± 3.15
Kandhaga Parpam	50 $mg\,kg^{-1}\,day^{-1}$, p.o.),	126.02 ± 3.58	126.10 ± 2.58	110.54 ± 3.41*	103.89 ± 4.30**
Diclofenac sodium	(45 $mg\,kg^{-1}\,day^{-1}$, p.o.).	123.36 ± 2.96	122.41 ± 3.46	124.23 ± 5.74	130.26 ± 5.95

Values are mean ± SEM of 6 animals. One-way ANOVA followed by Dunnet test. *p<0.05, ** p<0.01 Vs arthritic control


Effect of Kandhaga Parpam on Mean paw edema in CFA-induced chronic arthritic rats
Mean paw edema volume in ml
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Day 1
Day 7
Day 14
Day 21
Duration of Treatment
Control
KP-I
KP-II
Standard


Effect of Kandhga Parpam on biochemical Parameters in CFA induced arthritic rats
200
180
160
140
120
100
80
60
40
20
0
5.5
5.45
5.54
6.22
5.72
129.11
131.41
130.2
172.11
180.02
44.95
45.79
47.02
46.33
46.12
51.22
49.64
50.26
51.08
52
3.14
8.24
6.2
5.03
4.64
25.05
76.58
44.16
38.51
33.25
Total Protein (g/dL)
SGOT (IU/L)
SGPT(IU/L)
ALP (IU/L)
CRP (mg/dL)
RF (IU/mL)
Normal
Control
KP-I
KP-II
Standard


Effect of Kandhga Parpam on biochemical Parameters in CFA induced arthritic rats
80
70
60
50
40
30
20
10
0
Normal
Control
KP-I
KP-II
Standard
Hb (g/dl)
PCV (%)
RBC (x106/ml)
WBC(103/mm3)
ESR(mm/hr)

Bio statistical analysis

. BIO STATISTICAL ANALYSIS

Treatment for Kumba vatham

The most popular statistical tool, namely, Fisher's Exact Test analysis has been employed to analyses the effectiveness with the help of a hypothesis.

Hypothesis

There is no reduced of symptoms among the patients for the treatment of Kumba vatham.

Symptoms	**Number of Cases**	
	Reduced	**Not Reduced**
Acute pain in the shoulder joints	28 93.3%	2 6.7%
Acute pain in the shoulder joints , Tenderness,Stiffness, Difficult in moving the shoulder joints.	4 66.7%	2 33.3%
Acute pain in the shoulder joints , Tenderness, Radiating pain	2 50%	2 50%

Software: spss17 version

Number of cases: 40

Test: Fisher's Exact test

Confidence Interval: 95%

Result:

P Value (2 tailed): $p<0.05$

Inference:

Since the p value is significant (<o.05), The hypothesis is not accepted. So there is significant reduced of symptoms among the patients for the treatment of Kumba vatham. Hence it is concluded that the treatment was effective and significant.

Consent form

CONSENT FORM

I certify that I have disclosed all the details about the study in the terms readily understood by the patient.

DATE : SIGNATURE
NAME

CONSENT BY THE PATIENT

I have been informed to my satisfaction by the attending physician for the purpose of the clinical trial and the nature of the drug treatment and follow up including the lab investigation to be performed to monitor and safeguard my body functions.

I am aware of my right to opt out of the trial at any time during the course of the trial without having to give reasons for doing so.

I ,exercising my free power of choice, here by give my consent to be included as a subject in the clinical trial of **KANTHAGA PARPAM** for the treatment of **KUMBAVATHAM.**

DATE: SIGNATURE
NAME

§¿¡Â¡ÇŧÂŧý ´ôÒ¾ø ÀÊÅõ

¾ŧÕ. _____ ¬ ¸ŧÂ ¿¡ý _____ÅÂÐ,
(_____
_____
_____Åºŧì Ì õ þ¼õ.) ±ý ÍÂ ¿ŧ¨ É×¼ý ±Ø¾ì ¦¸¡Î ì Ì õ ´ôÒ¾ø ÀÊÅõ.

¿¡ý **Ì õÀÅ¡¾õ** ±ý Ûõ §¿¡Â¡ø À¡¾ì¸ôÀð Î ¦ºý¨É,«ÃÍ ºŧò¾ ÁÕòÐÅ ¸øæ¡ŧÂŧø (þ¼õ: «È ŧï÷ « ñ ½¡ þó¾Â ÁÕòÐÅÁ¨É, «ÕõÀ¡ì¸õ, ¦ºý¨É-106.) ¿¼ò¾ôÀÎõ ºŧò¾ ÁÕòÐÅ ¬Ã¡öîºŧ ãÄõ ºŧ¸ŧî¨º ¦ÀÈ ±ý ÍÂ ¿ŧ¨É×¼ý ÓØºõÁ¾ò¨¾Ôõ ¦¾¡ŧÅŧòÐì¦¸¡û¸§Èý.

þó¾ ¬Ã¡öîºŧÂŧý §¿¡ì¸õ, ÁÕòÐÅõ ¦ºöÔõ Ó¨È, ¦¾¡¼÷¸ ñ¸¡½ŧôÒ ÁüÚõ ±ý ¯¼ø ¿Äõ ÌÈŧò¾ ÁÕòÐÅ À¡ŧ§º¡¾¨É¸¨Çô ÀüÈŧÂ Åŧ¡ŧÅ¡É ÅŧÇì¸õ ±Éì Ì ÁÕòÐÅõ ¦ºöÔõ ÁÕòÐÅ÷ ãÄõ ¦¾Çŧ×ÀÎò¾ôÀðÎûÇÐ. þó¾ ¬Ã¡öîºŧÂŧø Àí Ì ¦¸¡ûÙõ ±ý ºõÁ¾ò¾üÌ Â¡Õ¨¼Â ¿ŧ÷Àó¾Óõ ¸¡Ã½Áŧø¨Ä±ýÀ¨¾ ¦¾¡ŧÅŧòÐì¦¸¡û¸§Èý.

þôÀÊì Ì,

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Ó¸Å¡ŧ :

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Case sheet proforma

CASE SHEET
POST GRADUATE DEPARTMENT - BRANCH-I
(POTHU) MARUTHUVAM

GOVT. SIDDHA MEDICAL COLLEGE & ANNA HOSPITAL, CHENNAI-106.

CASE SHEET PROFORMA FOR "KUMBAVATHAM"

WARD NO.	:	NATIONALITY	:
I.P. NO	:	RELIGION	:
BED NO	:	OCCUPATION	:
NAME	:	INCOME	:
AGE	:	D.O.A	:
SEX	:	D.OD	:
PERMANENT ADDRESS :			
		DIAGNOSIS	:
TEMPORARY ADDRESS: Govt. Siddha Medical College & Anna Hospital, Chennai – 106.		MEDICAL OFFICER	:

COMPLAINTS AND DURATION :

HISTORY OF PRESENT ILLNESS:

HISTORY OF PAST ILLNESS :

PERSONAL HISTORY & HABITS:

1. Diet	:	Veg.	☐	Non veg.	☐
2. Marital status	:	single	☐	married	☐
3. Emotional stress	:	Yes	☐	No	☐

4. Addiction : Yes ☐ No ☐
   - If yes specify :_____
5. Bowel habit : Regular ☐ Constipation ☐
6. Sleep : Good ☐ Disturbed ☐ ☐
   Insomnia
7. Presence of anxiety : Yes ☐ No ☐

FAMILY HISTORY:

- Cardiovascular diseas ☐ Yes ☐ No
- Tuberculosis Y☐ No☐
- Others Y☐ No☐

If yes specify : .

GENERAL EXAMINATION:

1. Physical build : lean ☐ normal ☐ obese ☐
2. Height (cm) :
3. Weight(kg) : :
4. Pulse rate :
5. Heart rate :
6. Respiratory rate :
7. Blood pressure :
8. Pallor :
9. Cyanosis :
10. Jaundice :
11. Clubbing :
12. Pedal oedema :
13. JVP :

SYSTEMIC EXAMINATION:

- **CVS** : ☐ Normal ☐
  Abnormal
  - If abnormal ,

    details_____

- **CNS** : ☐ Normal ☐
  Abnormal
  - If abnormal ,
    details_____
- **Respiratory system** : Normal ☐ ☐
  Abnormal
  - If abnormal ,
    details_____
- **Digestive system** : ☐ Normal ☐
  Abnormal
  - If abnormal ,
    details_____
- **Urogenital system** : ☐ Normal ☐
  Abnormal
  - If abnormal ,
    details_____

SIDDHA ASPECTS

Yaakai (udal nilai)		Mukkunam	
1.	☐ Vatham		☐ 1. Sathuva gunam
2.	☐ Pitham		☐ 2. Raasatha gunam
3.	☐ Kapham		☐ 3. Thamo gunam
4.	☐ Kalappu		

PARUVA KAALAM (SEASONS)

1. Kaar Kaalam (Aavani-Puratasi) Aug-sept. ☐
2. Koothir Kaalam (Iypasi-Karthigai) Oct-Nov. ☐
3. Munpani Kaalam (Maargazhi-Thai) Dec-Jan ☐
4. Elavenil Kaalam (Chithirai-Vaikasi) Apr-Ma ☐
5. Mudhuvenil Kaalam (Aani-Aadi) Jun-Jul ☐

NILAM (PLACES)

1.Kurinchi (Hills Areas) ☐
2.Mullai (Forest Areas) ☐
3.Marudham (Fertile Areas) ☐
4.Neithal (Sea Areas) ☐
5.Paalai (Desert Areas) ☐

IYAMPORIGAL/PULANGAL

1. Mei (Sensation) :
2. Vaai (Taste) :
3. Kann (Vision) :
4. Mooku(Smell) :
5. Sevi (Hearing) :

KANMENTHIRIYAM / KANMAVIDAYAM

1.Kai [Koduthal] :
2.Kaal [Nadathal] :
3.Vaai [Pesal] :
4.Eruvai [Malam Kazhithal] :
5.Karuvai [Aananthithal] :

MUMMALAM

1. Malam
2. Moothiram
3. Viyaravai

UYIR THATHUKKAL:

Vatham:

1. Pranan :
2. Abanan :
3. Viyanan :
4. Udhanan :
5. Samanan:
6. Naagan:
7. Koorman:
8. Kirukaran:
9. Devadathan:
10. Dhananjeyan:

PITHAM:

1. Anal Pitham:
2. Ranjaga Pitham:
3. Saadhaga Pitham:
4. Aalosaga Pitham :
1. Prasaga Pitham:

KAPHAM:

1. Avalambagam:
2. Kledagam:
3. Podhagam:
4. Tharpagam:
5. Santhigam:

UDAL THATHUKKAL:

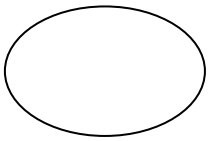
1. Saaram :
2. Senneer :
3. Oon :
4. Kozhuppu :
5. Enbu :
6. Moolai :
7. Sukkilam / Suronitham:

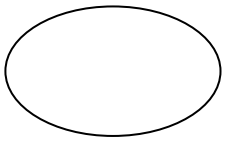
ENVAGAI THERVU:

1. Naa -
2. Niram -
3. Mozhi -
4. Vizhi -
5. Sparisam -
6. Malam
    a. Niram
    b. Nurai
    c. Erugal
    d. Elagal
7. Moothiram
    a. Neerkuri
        1. Niram
        2. Edai
        3. Manam
        4. Nurai
        5. Enjal
    b. Neikuri
8. Naadi

Neikuri examination:

Before treatment: **After treatment:**





SIGNS AND SYMPTOMS

PRESENT

ABSENT

- **Pain in shoulder joints**
- **Tenderness**
- **Stiffness**
- **Difficulty to move the joint**
- **Radiating pain**

Assessment	Before Treatment	After Treatment			
		I	II	III	IV
Pain in shoulder joints					
Tenderness					
Stiffness					
Difficulty to move the joint					
Radiating pain					

LABORTORY INVESTIGATIONS:
Blood:

S.No	Parameters	Before treatment	After treatment
	TC		
	DC		
	Hb gms%		
	ESR 30 mints 60 mints		
	Blood Sugar (F) (P)		
	S.Cholesterol		
	B.Urea		
	B.Creatinine		

Urine:

1.	Albumin		
2.	Sugar		
3.	Deposits		

OTHER INVESTIGATION:
SHOULDER JOINT AP & LATERAL VIEW

TRAIL DRUG : KANTHAGAPARPAM

Dose : 200 mg b.i.d after food

Anubanam : Honey

Duration of treatment: 20 days

Pathiam (Do's and Don'ts)

Prognosis at the end of the treatment

Medical Officer Signature: **PROF./ H.O.D**

Bibliography

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4. Kannusamiyam parambarai vaithiyam
5. Agathiyar gunavadam
6. Agathiyar kanmakandam 300
7. Agathiyar naadi
8. Thaerayar vagadam
9. Maruthuva thani padal
10. Agathiyar 2000
11. Astaanga sangiragam
12. Bohar vaithiyam 700
13. Jeeva rakshaamirtham
14. Thanvanthiri vaidiyam
15. Thaerayar vaidiyam
16. Sikicha rathna theebam
17. Thaeran vaenba
18. Noi nadal noi muthal nadal Dr. Vaenugopal
19. Thirumular Thirumanthiram
20. Sathaga naadi
21. Pathartha guna chinthamani
22. Thaeran maga karisal
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